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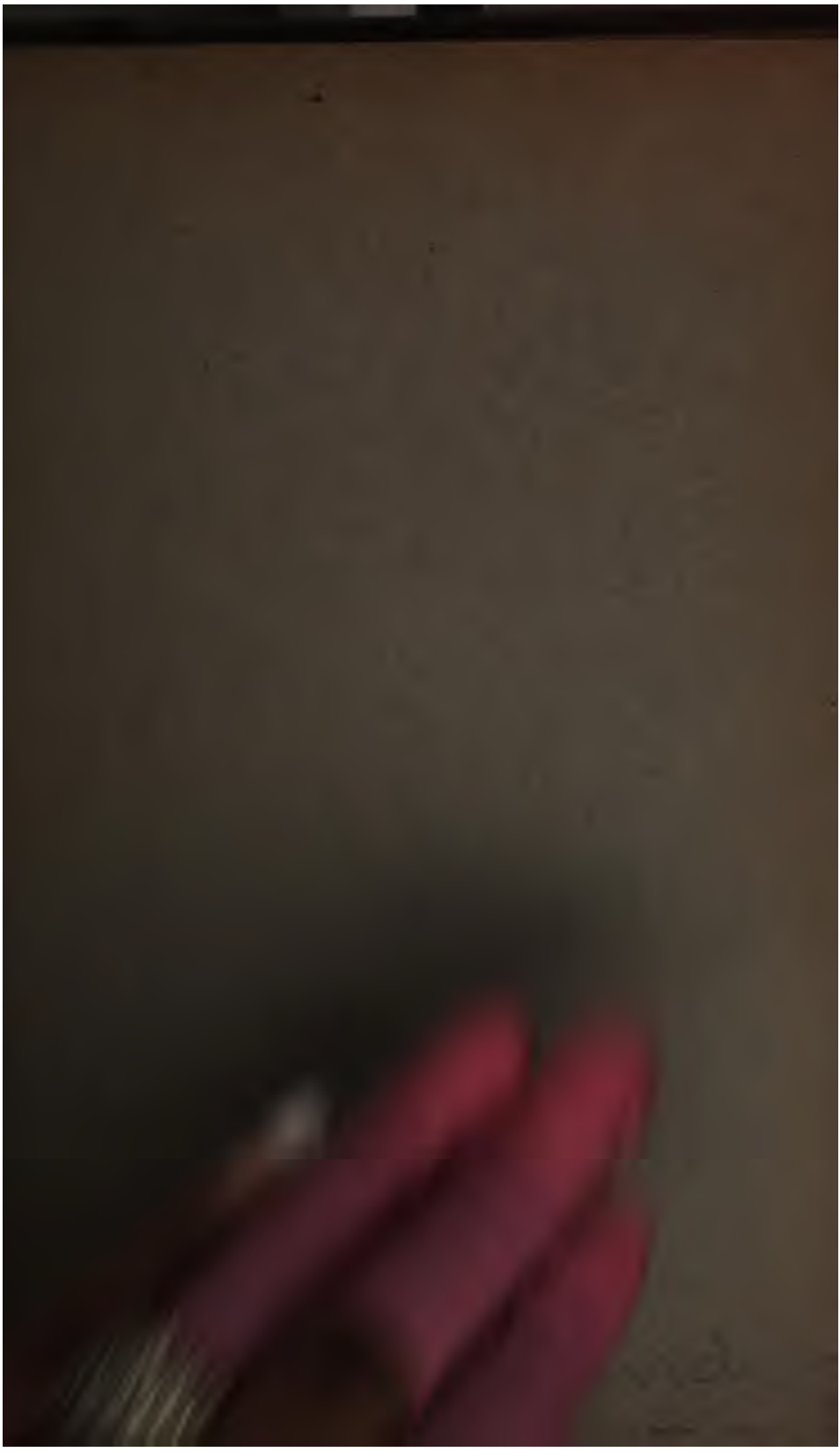

NINETY-SEVENTH

QUARTERLY REPORT

OF THE

Department of Public Works

OF THE

CITY OF PROVIDENCE, R. I.

QUARTER ENDING MARCH 30, 1907.

The Providence Press:
SNOW & FARNHAM, CITY PRINTERS,
63 Washington Street,
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REPORT.

OFFICE OF THE DEPARTMENT OF PUBLIC WORKS,
CITY HALL, PROVIDENCE, R. I., April 1, 1907.

TO THE HONORABLE THE CITY COUNCIL:

In compliance with the requirements of Chapter 41 of the ordinances, the Commissioner of Public Works respectfully presents the ninety-seventh quarterly report of the expenditures by the several departments under his direction and control, with statements of work ordered and the condition and cost of same, for the quarter ending March 30, 1907.

WATER WORKS.

January 12th, the proposal of the Ames Iron Works to furnish and deliver, f. o. b. Providence, one automatic single-cylinder engine arranged for direct connection to 125 K. W. generator, for the sum of $1,980.00, was accepted.

January 16th, the proposal of John I. Drake to furnish the labor and material necessary for installing an electric power plant at Pettaconset for the sum of $1,309.76, was accepted.

January 19th, the proposal of the Coffin Valve Company to furnish and deliver at the city yard nine self-contained, bronze mounted sluice gates for the Pettaconset filter beds for the sum of $794.00, was accepted.

January 22d, the proposal of the Wheeler Condenser and Engineering Company to furnish one Edwards steam driven air pump for $675.00, f. o. b. Carteret, N. J., was accepted.

January 24th, the proposal of the Crocker-Wheeler Company to furnish and deliver in Providence one 125 K. W. direct current, engine type generator, for use at Pettaconset, for the sum of $2,666.00, was accepted.

February 14th, the proposal of the Fuller Iron Works to furnish and deliver at the city yard the special castings required for the high pressure fire service for the sum of 2 9-10 cents per pound, was accepted.

March 26th, the proposal of Frederick E. Shaw to lay the water pipe in sections one and two of the high pressure fire service was accepted and contracts subsequently executed.

The estimated cost of the work is $18,113.15.

The average daily consumption of water during the last quarter was 16,077,530 gallons.

Water pipes were laid during the quarter as follows:

6-INCH.

In McKinley and Melrose streets, and in Alger, Elmdale and Hunnewell avenues	1,972.41 feet.

or, 373 + miles.

Statement of sizes and lengths of pipe laid since the commencement of the work:

42-inch	25,630.70 feet.
36-inch	10,208.82 feet.
30-inch	61,410.07 feet.
24-inch	46,413.05 feet.
20-inch	9,626.59 feet.
16-inch	42,142.02 feet.
12-inch	113,295.94 feet.
10-inch	15,062.78 feet.
8-inch	310,629.09 feet.
6-inch	1,280,570.29 feet.
Total	1,914,989.35 feet.

or, 362.687 + miles.

Statement of sizes and lengths of pipe laid for the special water service for fire protection since the commencement of the work:

24-inch	4,297.46 feet.
16-inch	23,004.37 feet.
12-inch	2,215.76 feet.
Total	29,517.59 feet.

or 5.59 + miles.

The total number of fire hydrants, exclusive of those for special service for fire protection, is now two thousand one hundred and seven — nineteen hundred and seventy-four flush, and one hundred and thirty-three post.

The total number of fire hydrants on the special water service for fire protection is ninety-two.

During the quarter one hundred and eighty-four water meters were set, of which number fifty-four were to replace other meters. The use of seven meters was discontinued.

The following meters were in use at the close of the quarter:

Kind.	Size.									Total.
	⅝-in.	¾-in.	1-in.	1¼-in.	2-in.	3-in.	4-in.	6-in.	8-in.	
Ball & Fitts	1,659	338	80	9	4	.....	.....	.....	.....	2,090
Ball & Fitts, rotary	.....	.....	4	4	.....	2	1	.....	.....	11
Crown	9,871	1,268	375	171	50	32	28	1	.....	11,796
Empire	1,625	199	83	52	14	1	1	.....	.....	1,975
Fales, Jenks & Sons	.....	.....	1	.....	.....	.....	.....	.....	.....	1
Gem	.....	.....	.....	.....	17	32	19	4	.....	72
Hersey	24	.....	.....	.....	.....	.....	.....	.....	.....	24
Nash	382	.....	.....	.....	.....	.....	.....	.....	.....	382
Thomson	4,932	423	74	54	21	7	7	1	.....	5,519
Trident	103	.....	1	.....	.....	.....	.....	.....	.....	104
Venturi	.....	.....	.....	.....	.....	.....	.....	.....	1	1
	18,596	2,228	618	290	106	74	56	6	1	21,975

One hundred and twenty-two plumber's licenses were issued during the quarter, all of which expire December 31, 1907.

Five hundred and twenty-five plumbing permits were issued during the quarter.

Seventy-six applications for water were made during the quarter, making the total number twenty-eight thousand one hundred and six.

The number of new service stops opened during the quarter was sixty-six.

The total number of service stops opened to March 30, 1907, inclusive, was twenty-seven thousand three hundred and ninety-eight. The number in actual use March 30, 1907, was twenty-five thousand one hundred and nineteen.

The amount of bills approved on account of water works from January 1, to March 30, 1907, inclusive, was:

For maintenance, ... $70,532 71

Classified as follows:

PETTACONSET PUMPING STATION.

Coal and wood	$2,597 28	
Real estate	1,950 00	
Firemen	991 70	
Sundries	853 91	
Worthington high-duty engine	755 88	
Engineers	590 58	
Superintendence	442 00	
Cornish engine-house	370 00	
Repairs on boilers	315 76	
Oil, waste and packing	189 07	
Labor on fuel	167 13	
Barn expenses	95 61	
Care of grounds	88 41	
Lights	27 22	
Allis-Chalmers-high-duty engine	21 54	
Corliss pumping engine and house	7 56	
Horses, wagons, harnesses, etc	2 80	
Amount carried forward		$9,466 45

Amount brought forward		$9,466 65

Sand Filtration Plant.

Cleaning beds	$14,433 12	
Installation	8,532 16	
Labor and supplies, pumping	1,884 18	
Miscellaneous supplies	1,570 17	
Laboratory — labor and supplies	584 54	
		27,004 17

Sockanosset Reservoir.

Watchman	$182 00	
Sundries	18 34	
		200 34

Hope Pumping Station.

Firemen	$434 07	
Sundries	363 25	
Engineers	299 00	
Lights	57 19	
Repairs on boilers	50 90	
Holly pumping engine	13 38	
		1,217 79

Hope Reservoir.

Watchman	$204 75	
Sundries	41 78	
		246 53

Fruit Hill Reservoir.

Sundries	$314 73	
Watchman	182 00	
		496 73

Meter Department.

Water meters	$3,620 07	
Setting and repairing meters	1,424 60	
		5,044 67

Pipe Line and Service Stops.

Repairs	$4,994 20	
Inspection of pipe line and services	1,993 11	
Salaries of assistant engineers	1,773 25	
Superintendence — salaries	910 39	
		9,670 95
Amount carried forward		$53,347 63

Amount brought forward		$53,347 63
Pipe Yard.		
Special water service for fire protection	$5,387 47	
Special castings	1,616 99	
Laying service pipe	1,436 31	
Laying water pipe	1,411 47	
Taps and stops	1,300 22	
Pig lead and tin	802 36	
Stop valves	606 03	
Fire hydrants, boxes and covers	357 75	
Leading main from Sockanosset to city — to lay	215 30	
Thawing out water pipe	113 24	
Tools	104 06	
Labor on and carting pipe	69 75	
Pipe yard, office expenses	55 28	
Repairs on pipe yard buildings	4 00	
		13,480 23
Miscellaneous.		
Clerks' and inspectors' salaries	$1,860 00	
Barn expenses	585 43	
Horses, wagons, harnesses, etc	472 34	
Prevention of defilement of the Pawtuxet	300 00	
Telephone lines	153 93	
Car fares	150 00	
Inspection of water pipes with reference to electrolysis	97 00	
Real estate at Pawtuxet	67 50	
Sundries	18 65	
		3,704 85
		$70,532 71

The total expenditures to March 30, 1907, inclusive, was $11,004,357 13

The *net* expenditure for maintenance from January 1, to March 30, 1907, inclusive was	$63,309 08
The *net* expenditure for maintenance to March 30, 1907, inclusive, was	$3,235,898 02

The value of the water works system January 1, 1907, as estimated by the city engineer, was as follows:

Pettaconset pumping station	$340,694 00	
Hope pumping station	117,903 11	
Sockanosset, Hope and Fruit Hill Reservoirs	683,982 39	
Main lines and distribution pipes	2,828,178 21	
Real estate in Pawtuxet and Lincoln	15,975 00	
Tools and supplies	53,629 26	
		$4,040,361 97

Bills deposited with the city treasurer for collection from January 1 to March 30, 1907, inclusive, amounted to . . . $474,664 44

As follows:

Water	$467,606 24	
Water meters	2,629 50	
Labor and material, laying services, etc	1,972 94	
Setting and repairing meters	1,824 19	
Sale of old metals	231 96	
Rent of real estate	172 60	
Penalties	136 00	
Removing snow from in front of voting booths	72 81	
Permanently closing service stops	15 00	
Empty oil barrels	3 20	
		$474,664 44

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of . $463,806 09

As follows:

Water	$456,446 46	
Water meters	2,888 75	
Setting and repairing meters	2,067 75	
Labor and material, laying services, etc	1,878 97	
Sale of old metals	231 96	
Penalties	136 00	
Rent of real estate	133 00	
Permanently closing service stops	20 00	
Empty oil barrels	3 20	
		$463,806 09

SEWERS.

One hundred and thirty-one drain layer's licenses were issued during the quarter, all of which expire December 31, 1907.

During the quarter, one hundred and eleven permits were issued to drain layers — forty-four for new work and sixty-seven for extensions and repairs of drains.

January 28th, the proposal of the Union Sewer Pipe Company to furnish and deliver in the city yard sewer pipe and branches, was accepted and a contract subsequently executed.

January 30th, the proposal of Frederick E. Shaw to build extra connections on Section 31 of the Improved Sewerage System, that are not included under contract, was accepted.

March 6th, assessments for the cost of constructing sewers were certified to the city treasurer as follows:

Dixon street, from Stamford avenue to Elmwood	$884 29
McKinley street, from Elmwood avenue to Alger	1,467 58
Handy street, from Amherst to Amsterdam	924 86
Waverly street, from Cranston to Union avenue	2,031 92
Plenty, Linden and Sorrento streets	2,356 95
Waterloo street, from near Parade to Dexter	683 73
Massie avenue, Baxter street and right of way	2,211 31
Kelly and Longmont streets	1,538 03
Sackett street, from Elmwood avenue to Melrose street	2,313 21
Eudora and Poe streets	1,687 60
Dora and Wallace streets	3,560 43
Taber avenue from Lloyd to President	606 47
	$20,266 38

March 15th, the proposal of the James C. Goff Company to furnish and deliver on the city wharf one cargo of Sanford bricks at $9.00 per M., was accepted.

March 28th, the proposal of the F. W. Wait Lime Company to extend their contract for furnishing lime to the sewer maintenance department for one year to May 1, 1908, at same price, was accepted.

Work upon the following sewers was in progress at the close of the quarter, namely:

No. of resolution.	Date of approval.	
68.	Feb. 7, 1905,	*Pleasant Valley Division, Section 31.*

No. of resolution.	Date of approval.	
288.	Sept. 12, 1905,	*West River street, from Cross to Burke, and from West River street at Elk easterly through right of way about 530 feet to end of Section 22 of the improved sewerage system.*
209.	May 8, 1906,	*Veazie street, from its summit northwesterly to the sewer in Douglas avenue near Stansbury street, and from its summit southeasterly in Veazie street and Douglas avenue to present end of sewer about 270 feet west of Hawkins street.*
358.	Aug. 3, 1906,	*Mount Pleasant avenue, from Atwells to Dover street.*

Work upon the following sewers, completing the work ordered by the city council, had not commenced March 30, 1907, namely:

No. of resolution.	Date of approval.	
210.	May 8, 1906,	*Plainfield street, from near Lowell avenue to Laurel Hill.*
359.	Aug. 3, 1906,	*Progress avenue, from Webster to Whitehall street.*

The amount of bills approved on account of sewers from January 1 to March 30, 1907, inclusive, was:

For construction, ... $11,334 73

Charged as follows:

Material	$984 25
Testing cement	289 31
Sundries	257 37
Contract reservations	145 00
Tools	67 64
Sewer in Mount Pleasant avenue, from Atwells to Dover street	73 76
Sewer in Veazie street and Douglas avenue	60 11
Sewer in West River street and in right of way	3,017 82
Sewer in Pleasant Valley Division, Section 31	6,439 47
	$11,334 73

For maintenance, ... $27,299 83

Classified as follows:

Cleaning basins and sewers	$8,621 11
Repairing basins and sewers	1,307 70
Inspection of connections	638 08
Tools	489 67
Salary, Superintendent	442 00
Barn expenses	360 14
Cleaning and repairing old drains	260 45
Horses, wagons, harnesses, etc	231 69
Office expenses	85 00
Telephone lines	44 18
Sundries	37 04
Cleaning private connections	36 02
Filling cisterns, etc	11 85
Repairs on gate houses	45

ERNEST STREET STATION.

Coal and wood	1,633 89
Engineers	955 47
Cleaning screens	706 56
Cleaning and repairing pumps	590 78
Firemen	516 40
Repairs on engines	167 78
Care of grounds	83 62
Repairs on buildings	75 49
Supplies	54 55
Repairs on boilers	52 62
Lights	47 10
Care of buildings	35 52

SEWAGE PRECIPITATION TANKS.

Chemicals	4,619 74
Labor in sludge disposal	2,596 94
Labor on sewage precipitation	1,467 81
Electrical power	472 50
Fuel	273 58
Miscellaneous supplies	178 23
Repairs on buildings	89 85
Repairs on machinery	59 06
Lights	38 95
Repairs on tanks	18 01
	$27,299 83

The *net* expenditure for construction of sewers to March 30, 1907, inclusive, was $7,913,009 79

The *net* expenditure for maintenance of sewers to March 30, 1907, inclusive, was $1,417,940 83

Bills deposited with the city treasurer for collection from January 1 to March 30, 1907, inclusive, amounted to . . . $932 39

As follows:

Sale of old metals	$515 88
Miscellaneous work	187 64
Cleaning private connections	77 00
Sale of old rubber	60 29
Pumping out cellars	21 85
Sewer material	69 73
	$932 39

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of $1,076 08

As follows:

Sale of old metals	$515 88
Miscellaneous work	286 88
Cleaning private connections	62 75
Sale of old rubber	60 29
Pumping out cellars	41 85
Sewer material	108 43
	$1,076 08

HIGHWAYS.

One permit to open street was issued during the quarter.

January 25th, the proposal of the Buffalo Steam Roller Company to furnish and deliver at the city yard front rolls and gears for the Buffalo-Pitts roller, and gears for a Harrisburg roller, for the sum of $593.00, was accepted.

The following proposals for furnishing and delivering circular curbing and crosswalk stone in the city yard, were accepted, viz.:

Nelson A. Bennett,	100 pieces of 10-foot radius curbing at	$3.40 each.
Albert A. Lippitt,	100 pieces of 10-foot radius curbing at	3.40 each.
	100 pieces of 8-foot radius curbing at	2.71 each.
R. B. Marriott and Son,	80 pieces of 2-foot corners at	1.75 each.
Smithfield Granite Co.,	300 lin. feet of 18-inch crosswalk stone at	.37 per foot.
	600 lin. feet of 14-inch crosswalk stone at	.31 per foot.

During the quarter, statements were prepared of the cost of curbstones set, ascertained by the commissioner and certified to the board of aldermen for approval, as follows:

Arthur avenue and Dean street, from West Exchange to new bridge over the tracks of the N. Y., N. H. and H. R. R. Co..	$287 89
Allens avenue, from Henderson street to Globe	1,069 39
Baxter street, from Massie avenue to its southerly termination.	119 58
Cedar street, from Acorn to West Exchange	263 68
Dean street, from Cedar to West Exchange	396 38
Dixon street, from Elmwood avenue to Stamford	552 21
Ellery street, from Wendell to Union avenue	901 16
Handy street, from Amsterdam to Amherst	609 40
Longmont street, from Admiral to Salina	547 71
Massie avenue, from Broad street to Baxter	872 48
Poe street, from Rhodes to Public	64 14
Sorrento street, from Union avenue to Waverly street	488 34
Taber avenue, from President to Lloyd	501 44
Unit street, from Chalkstone avenue to Maynard street	2,450 34
Andem street, from Canton to Bergen	867 62
Dora street, from Webster avenue to Whitehall street	1,419 18
Elton street, from Wayland avenue to Humboldt	440 39
Eudora street, from Eddy to Poe	434 77
Grotto avenue, from Penrose to Irving	1,285 07
McKinley street, from Alger avenue to Elmwood	705 12
Narragansett avenue, from the city line northerly to a point about 120 feet north of Ardoene street	2,706 68
Ralph street, from Eastwood avenue to Laban street	301 11
Sackett street, from Elmwood avenue to Melrose street	1,263 95
Wallace street, from Priscilla avenue to Whitehall street	733 37
Waverly street, from Union avenue to Cranston street	908 50
What Cheer avenue, from Laurel Hill to Pocasset	1,654 53
	$21,844 43

The following work was in progress March 30, 1907:

Sidewalks Curbed and Gutters Paved.

Date of order.			
Aug.	2,	1906,	*Allens avenue, from Henderson street to Globe.*
Sept.	20,	"	*Kelly street, from the angle in said street to Bancroft.*
Nov.	15,	"	*McKinley street, from Elmwood avenue to Alger.*

Lay Out, Extend, Widen, and Improve.

Date of order.			
Aug.	3,	1906,	*Allens avenue and Eddy street.*

The following work, ordered by the board of aldermen and city council, had not commenced March 30, 1907, namely:

Sidewalks Curbed and Gutters Paved.

Date of order.			
Nov.	15,	1906,	*Mount Pleasant avenue, from Atwells to Dover street.*
"	"	"	*Progress avenue, from Webster to Whitehall street.*
Feb.	21,	1907,	*Melrose street, from Sumter to Sackett.*
"	"	"	*Lenox avenue, from Elmwood to Melrose street.*
March	21,	"	*Chatham street from Branch avenue to Silver Spring street.*

Bills approved on account of highways from January 1, to March 30, 1907, inclusive, amounted to $47,055 20

Classified as follows:

Removing snow and ice	$17,459 38	
Crushed stone, material and labor	7,466 02	
Cleaning streets	4,870 97	
Repairs on unpaved streets	3,319 20	
Blacksmith and wheelwright shop	3,291 13	
Stone, paving and crosswalk	2,291 84	
Barn expenses	2,205 77	
Steam rollers, repairs and supplies	1,912 87	
Tools, implements, etc	1,213 75	
Repairs on stone crushers	533 71	
Labor on material	446 25	
Superintendent's salary	442 00	
Horses, wagons, harnesses, etc	436 83	
Watchman at city yard	182 00	
Repairs on paved streets	175 74	
Sundries	167 24	
Office expenses, city yard	109 09	
Building driveways, etc	50 16	
Fencing streets, material and labor	31 47	
Repairs on buildings, highway yard	16 24	
Telephone lines	5 60	
		$46,627 26

New Work — Building and Rebuilding Streets, Etc.

Sidewalks Curbed and Gutters Paved.

Lenox avenue, from Elmwood to Melrose street	$168 45	
McKinley street, from Elmwood avenue to Alger	204 95	
Melrose street, from Sumter to Sackett	54 54	
		427 94
		$47,055 20

Bills deposited with the city treasurer for collection from January 1, to March 30, 1907, inclusive, amounted to . . . $87,295 96

As follows:

Labor and material	$54,576 36
The Rhode Island Company for widening Crawford and South Main streets	19,945 36
Amount carried forward	$74,521 72

Amount brought forward	$74,521 72
The N. Y. N. H. and H. R. R. Company, for granite blocks, etc., in Allens avenue	11,020 78
Blacksmith and harness work for other departments	812 04
Building driveways, etc	408 93
Boarding horses for other departments	247 92
Street sweepings	170 37
Manure from barn	72 00
Removing snow and ice	29 80
Sale of one second-hand double harness	10 00
Empty oil barrels	2 40
	$87,295 36

During the quarter, coupons from bills collected have been returned by the city treasurer, and receipted for to the amount of $76,658 65

As follows:

Labor and material	$55,281 52
The Rhode Island Company, for widening Crawford and South Main streets	19,945 36
Blacksmith and harness work for other departments	541 80
Building driveways, etc	334 98
Boarding horses for other departments	247 92
Street sweepings	192 87
Manure from barn	72 00
Removing snow and ice	29 80
Sale of one second-hand double harness	10 00
Empty oil barrels	2 40
	$76,658 65

SIDEWALKS AND CURBING.

Bills approved on account of sidewalks and curbing from January 1, to March 30, 1907, inclusive, amounted to $731 13

Charged as follows:

Concreting sidewalks	$492 09
Granite curbing	211 32
Repairing sidewalks and gutters	27 72
	$731 13

Bills deposited with the city treasurer for collection from January 1 to March 30, 1907, inclusive, amounted to . . . $22,020 50

As follows:

Curbing bills	$21,783 18
Granite curbing	141 93
Concreting sidewalks	95 39
	$22,020 50

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of . $4,765 99

As follows:

Curbing bills	$4,453 52
Granite curbing	217 08
Concreting sidewalks	95 39
	$4,765 99

CITY ENGINEER.

Bills approved on account of the city engineer's department from January 1 to March 30, 1907, inclusive, amounted to $9,980 21

Charged as follows:

Salary — city engineer	$1,125 00
Salaries of assistants	7,733 25
Salaries of clerks	889 75
Supplies, drawing material, etc	203 31
Telephone lines	25 70
Car fares	2 30
Instruments and repairs	90
Sundries	40
	$9,980 21

Bills deposited with the city treasurer for collection (for one large city map) from January 1 to March 30, 1907, inclusive, amounted to $10 00

BRIDGES.

February 18th, the proposal of James A. Potter & Company to furnish and deliver either at Point street bridge or the city wharf, 64,405 feet of long leaf yellow pine lumber for $31.75 per M., was accepted.

March 28th, the proposal of the Pettaconset Construction Company to construct brick arches and level up with cement concrete at Point street bridge, was accepted and a contract subsequently executed. Amount of contract is $2,054.50.

Bills approved on account of bridges from January 1, to March 30, 1907, inclusive, amounted to $4,615 54

Charged as follows:

Acorn street bridge	$72 27
Barn expenses	90 17
Building at city yard	11 84
Carfares	25 00
Crawford street bridge	100 23
Francis street bridge	3 21
Geneva bridge	2 63
Hawkins street bridge	2 63
Horses, wagons, harnesses, etc	17 75
Lumber, hardware, etc	378 00
Manton bridge	8 26
Manton avenue bridge	20 45
Merino bridge	8 66
Mill street bridge	6 22
Nash lane bridge	3 44
Park street bridge	1 79
Point street bridge	543 49
Post office bridge	82 61
Promenade street bridge	1 34
Red bridge	99 05
Rent of keeper's house—Washington bridge	36 00
Salaries—Point street bridge	978 25
Salaries — Red bridge	513 50
Salaries — Washington bridge	524 50
Smith street bridge	12 76
Smithfield avenue bridge — to rebuild	5 83
Amount carried forward	$3,549 88

Amount brought forward	$3,549 88	
Smithfield avenue bridge	22 48	
Sundries	411 03	
Telephone lines	2 68	
Tools	242 68	
Veazie street bridge	2 63	
Washington bridge	228 46	
Washington row bridge	28 63	
Weybosset bridge	127 07	
	$4,615 54	

Bills deposited with the city treasurer for collection (for sale of paint stock), from January 1, to March 30, 1907, inclusive, amounted to $41 54

During the quarter, coupons from bills collected (for sale of paint stock), have been returned by the city treasurer and receipted for to the amount of . . . $41 54

Bills approved for amount of rebuilding abutments, piers, and superstructure, Point street bridge, from January 1, to March 30, 1907, inclusive, have been paid from the special appropriation for that work to the amount of $9,480 44

PUBLIC LIGHTS.

Bills approved on account of the public lights from January 1, to March 30, 1907, inclusive, amounted to $68,531 64

Charged as follows:

Arc lights	$49,065 88
Incandescent lights	13,308 68
Welsbach lights	5,899 08
Salaries	258 00
	$68,531 64

PUBLIC WORKS OFFICE.

Bills approved on account of the public works office from January 1 to March 30, 1907, inclusive, amounted to . . . $5,665 56

Charged as follows:

Salaries of commissioner and secretary	$1,968 55
Salaries of office assistants	3,418 00
Office supplies	259 06
Telephone lines	19 95
	$5,665 56

WALTER F. SLADE,

Commissioner.

1907.] CITY DOCUMENT. [No. 18.

NINETY-EIGHTH

QUARTERLY REPORT

OF THE

Department of Public Works

OF THE

CITY OF PROVIDENCE, R. I.

QUARTER ENDING JUNE 29, 1907.

The Providence Press:
SNOW & FARNHAM, CITY PRINTERS,
63 Washington Street.
1907.

182080

1907.] CITY DOCUMENT. [No. 18.

NINETY-EIGHTH

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QUARTER ENDING JUNE 29, 1907.

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63 Washington Street.
1907.

June 26th, the following proposals for furnishing coal to the water department for one year to July 1, 1908, were accepted, viz.:

Eastern Coal Co., for New River, delivered at Pettaconset pumping station, $4.75 per net ton.
" " for 300 tons, No. 2, North American red ash, delivered at Hope station, $3.45 per net ton.
" " for anthracite taken at their yard, $6.25 per net ton.
Providence Coal Co., for anthracite delivered at filtration plant, Pettaconset, $7.15 per net ton.
John R. White & Son, for 100 tons No. 2, North American red ash, delivered at Hope station, $3.41 per net ton.

June 28th, the proposal of the Consolidated Engine-Stop Company to furnish and install on the Allis engine at Pettaconset one "Monarch" engine-stop, speed-limit, test-board, and eight circuit-closers for $325.00, was accepted.

The average daily consumption of water during the last quarter was 16,352,159 gallons.

Water pipes were laid during the quarter as follows:

16-INCH.	
In Blackstone, Broad, Cross, Charles, Knight and West Friendship streets	2,740.06 feet.
12-INCH.	
In Blackstone, Broad, Cross, Dexter, Sprague and Westfield streets	1,546.91 feet.
8-INCH.	
In Blackstone, Dexter and Silver Spring streets; Laurel and Sterling avenues	432.22 feet.
6-INCH.	
In Allston, Chatham, Fuller, Hamilton, Heath, Montague, Mitchell, Niagara, Pilgrim, Ridge, Rugby, Shafter and Temple streets; Book, Rodgers and Saxon courts; Boylston, Edgemere, Health and Slater avenues; in Wentworth street in the town of Cranston	2,758.02 feet.
Total	7,477.21 feet.

or 1.416+ miles.

Water pipes were removed or abandoned during the quarter as follows:

12-INCH.

From Knight street	2.83 feet.

8-INCH.

From Broad, Charles, Cross, Friendship, Knight, Silver Spring and Sprague streets and Northup avenue	1,784.60 feet.

6-INCH.

From Blackstone, Dexter, Sprague, Westfield and West Friendship streets	2,437.59 feet.
Total	4,225.02 feet.

or, .800+ mile.

Statement of sizes and lengths of pipe laid since the commencement of the work:

42-inch	25,630.70 feet.
36-inch	10,208.82 feet.
30-inch	61,410.07 feet.
24-inch	46,413.05 feet.
20-inch	9,626.59 feet.
16-inch	44,882.08 feet.
12-inch	114,840.02 feet.
10-inch	15,062.78 feet.
8-inch	309,276.71 feet.
6-inch	1,280,890.72 feet.
Total	1,918,241.54 feet.

or, 363.303+ miles.

Water pipes were laid during the quarter for the special water service for fire protection, as follows:

16-INCH.

In West Exchange street; Brayton and Harris avenues	5,563.75 feet.

12-INCH.

In Acorn and Eagle streets	1,034.87 feet.
Total	6,598.62 feet.

or 1.249+ miles.

Statement of sizes and lengths of pipe laid for the special water service for fire protection since the commencement of the work:

24-inch	4,297.46 feet.
16-inch	28,568.12 feet.
12-inch	3,250.63 feet.
Total	36,116.21 feet.

or 6.84+ miles.

Fourteen fire hydrants were set during the quarter, one in each of the following locations, viz:

Ayrault street, east side, 308 feet south of Chalkstone avenue.
Candace street, east side, on south line of Lydia street.
Edgewood avenue, Cranston, north side, 472.5 feet west of west building line of Warwick avenue.
Gallup street, north side, 57 feet east of Gordon avenue.
Hunnewell avenue, east side, 750 feet north of Manton avenue.
Knight street, west side, on north line of Brighton street.
Knight street, west side, 9 feet south of line of Grant street.
Knight street, west side, 20 feet north of Washington street, west of Knight street.
Lloyd avenue, north side, 1 foot east of Cole avenue.
Montague street, north side, on west line of Boylston avenue.
Mowry street, north side, on east line of Forsyth street.
Norwood avenue, Cranston, north side, 568 feet east of Broad street.
West Friendship street, north side, 148 feet east of Elmwood avenue.
West Friendship street, south side, 178 feet west of Broad street.

The total number of fire hydrants, exclusive of those for special service for fire protection, is now two thousand one hundred eighteen — nineteen hundred and eighty-three flush, and one hundred and thirty-five post.

Eleven fire hydrants were set on the special water service for fire protection, one in each of the following locations, viz.:

Acorn street, east side, 147 feet north of Tingley street.
Eagle street, east side, 253 feet north of Harris avenue.
Eagle street, east side, 50 feet south of Kinsley avenue.
Harris avenue, north side, 4 feet east of Acorn street.
Harris avenue, north side, 9.5 feet west of Ashley avenue.
Harris avenue, north side, northeast corner Charlotte Hope street.

Harris avenue, north side, 18 feet east of Granger street.
Harris avenue, north side, 108 feet east of Eagle street.
West Exchange street, north side on east line of Bradford street.
West Exchange street, north side, 313 feet west of Bradford street.
West Exchange street, north side, 11 feet east of Brayton avenue.

The total number of fire hydrants on the special water service for fire protection is one hundred and three.

During the quarter two hundred and seven water meters were set, of which number forty-two were to replace other meters. The use of seven meters was discontinued.

The following meters were in use at the close of the quarter:

Kind.	Size.									Total.
	⅝-in.	¾-in.	1-in.	1¼-in.	2-in.	3-in.	4-in.	6-in.	8-in.	
Ball & Fitts	1,634	331	78	9	4	.....	.....	.....	.....	2,056
Ball & Fitts, rotary	.....	.....	4	4	.....	1	1	.....	.....	10
Crown	9,893	1,286	382	171	50	33	28	1	.....	11,844
Empire	1,681	203	84	53	14	1	1	.....	.....	2,037
Fales, Jenks & Sons	.....	.....	1	.....	.....	.....	.....	.....	.....	1
Gem	.....	.....	.....	.....	17	33	19	4	.....	73
Hersey	26	.....	.....	.....	.....	.....	.....	.....	.....	26
Nash	434	.....	.....	.....	.....	.....	.....	.....	.....	434
Thomson	4,960	423	74	54	21	7	7	1	.....	5,547
Trident	103	.....	1	.....	.....	.....	.....	.....	.....	104
Venturi	.....	.....	.....	.....	.....	.....	.....	.....	1	1
	18,731	2,243	624	291	106	75	56	6	1	22,133

Eight plumber's licenses were issued during the quarter making the total number one hundred and thirty, all of which expire December 31, 1907.

Seven hundred and fifty-six permits to do plumbing were issued during the quarter.

Two hundred and one applications for water were made during the quarter, making the total number twenty-eight thousand three hundred and seven.

The number of new service stops opened during the quarter was two hundred.

The total number of service stops opened to June 30, 1907, inclusive, was twenty-seven thousand five hundred and ninety-eight. The number in actual use June 29, 1907, was twenty-five thousand four hundred and thirty.

The amount of bills approved on account of water works from April 1, to June 29, 1907, inclusive, was:

For maintenance, ... $117,967.62

Classified as follows:

PETTACONSET PUMPING STATION.

Coal and wood	$4,088 13	
Firemen	963 69	
Sundries	760 25	
Engineers	590 72	
Superintendence	442 00	
Care of grounds	223 04	
Corliss pumping engine and house	206 64	
Oil, waste and packing	115 12	
Repairs on boilers	80 97	
Labor on fuel	69 72	
Barn expenses	65 50	
Real estate	58 59	
Lights	50 45	
Allis-Chalmers-high-duty engine	41 82	
Horses, wagons, harnesses, etc	7 63	
Worthington high-duty engine	4 64	
Cornish engine-house	2 36	
		$7,771 27

SAND FILTRATION PLANT.

Installation	$39,640 66	
Cleaning beds	4,707 87	
Labor and supplies, pumping	1,844 89	
Laboratory — labor and supplies	520 85	
Miscellaneous — supplies	219 89	
		46,934 16
Amount carried forward		$54,705 43

Amount brought forward		$54,705 43
Sockanosset Reservoir.		
Sundries	$274 19	
Watchman	182 00	
		456 19
Hope Pumping Station.		
Coal and wood	$636 64	
Firemen	436 29	
Engineers	299 00	
Sundries	211 34	
Lights	44 08	
Oil, waste and packing	18 00	
Holly pumping engine	1 25	
Repairs on boilers	75	
		1,647 35
Hope Reservoir.		
Sundries	$562 15	
Watchman	204 75	
		766 90
Fruit Hill Reservoir.		
Sundries	$452 41	
Watchman	182 00	
		634 41
Meter Department.		
Water meters	$6,276 95	
Setting and repairing meters	1,774 88	
		8,051 83
Pipe Line and Service Stops.		
Repairs	$4,218 55	
Salaries of assistant engineers	1,781 50	
Superintendence — salaries	912 73	
Inspection of pipe line and services	788 92	
		7,701 70
Pipe Yard.		
Special water service for fire protection	$12,689 35	
Cast iron water pipe	9,023 19	
Laying water pipe	6,218 46	
Leading main from Sockanosset to city — to lay	2,762 60	
Special castings	2,610 80	
Leak in Washington street main	1,615 80	
Amounts carried forward	$34,920 20	$73,963 81

Amounts brought forward	$34,920 20	$73,963 81
Laying service pipe	1,528 12	
Service pipe	1,386 80	
Stop valves	690 00	
Fire hydrants, boxes and covers	679 96	
Labor on and carting pipe	313 01	
Tools	269 77	
Taps and stops	155 73	
Pipe yard, office expenses	55 15	
Pig lead and tin	30	
		39,999 04

MISCELLANEOUS.

Clerks' and inspectors' salaries	$1,766 05	
Barn expenses	848 96	
Public drinking fountains and troughs	381 22	
Prevention of defilement of the Pawtuxet	300 00	
Horses, wagons, harnesses, etc	284 84	
Telephone lines	158 55	
Car fares	150 00	
Inspection of water pipes with reference to electrolysis	103 50	
Sundries	11 65	
		4,004 77
		$117,967 62

The total expenditures to June 29, 1907, inclusive, was $11,122,324 75

The *net* expenditure for maintenance from April 1, to June 29, 1907, inclusive was $108,767 26

The *net* expenditure for maintenance to June 29, 1907, inclusive, was $3,344,665 28

The value of the water works system January 1, 1907, as estimated by the city engineer, was as follows:

Pettaconset pumping station	$340,694 00	
Hope pumping station	117,903 11	
Sockanosset, Hope and Fruit Hill reservoirs	683,982 39	
Main lines and distribution pipes	2,828,178 21	
Real estate in Pawtuxet and Lincoln	15,975 00	
Tools and supplies	53,629 26	
		$4,040,361 97

Bills deposited with the city treasurer for collection from April 1 to June 29, 1907, inclusive, amounted to $90,801 81

As follows:

Water	$81,401 18	
Labor and material, laying services, etc	3,579 40	
Water meters	3,288 00	
Setting and repairing meters	2,183 65	
Rent of real estate	105 70	
Penalties	78 00	
One horse sold the highway department	75 00	
Empty meter cases	46 08	
Sale of hay at Sockanosset reservoir	20 00	
Permanently closing service stops	20 00	
Empty oil barrels	4 80	
		$90,801 81

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of . $104,237 38

As follows:

Water	$94,961 02	
Labor and material, laying services, etc	3,382 46	
Water meters	3,297 25	
Setting and repairing meters	2,094 72	
Rent of real estate	155 70	
Penalties	76 00	
One horse sold the highway department	75 00	
Removing snow from in front of voting booths	72 81	
Empty meter cases	46 08	
Repairs on pipe line	41 54	
Sale of hay at Sockanosset reservoir	20 00	
Permanently closing service stops	10 00	
Empty oil barrels	4 80	
		$104,237 38

SEWERS.

Eight drain layer's licenses were issued during the quarter, making the total number, one hundred and thirty-nine, all of which expire December 31, 1907.

During the quarter, three hundred and thirty permits were issued to drain layers — one hundred and sixty-six for new work and one hundred and sixty-four for extensions and repairs of drains.

April 15th contracts for the construction of sewers were awarded to Frederick E. Shaw and subsequently executed, as follows:

The amounts given below are those as estimated will be paid the contractors for labor and to be within the cost of inspection and materials.

No. of contract.	Date of approval.		
123.	April 2, 1907.	Wall street, from a point about 100 feet east of Tremont, to a point about [illegible] feet west of Cunningham	$831 10
124.	- - -	Montague street, from Brunswick avenue to Marion, and to Greenwood street from a point about 42 feet south of Arcella avenue to Marion	$14 40
125.	- - -	Anthony avenue, from Avon street to Lawton	$35 00
126.	- - -	Anthony avenue, from Justin street to Whitney avenue, and to Molloy street and Anthony avenue from Rowan street to Justin	$1,203 80
127.	- - -	Stanley avenue, from Locust Hill to Winter, Forest avenue, from Stanley to a point about 100 feet south of Forest street, and to Magnolia street, from near Winter avenue to Bennett street	2,638 90

May 20, the proposal of the Babcock and Wilcox Company, to furnish, deliver and erect at Ernest street pumping station one 345 horse power Babcock and Wilcox boiler in accordance with specifications for the sum of $4,607.00, was accepted.

May 23d, the proposal of James C. Goff Company to furnish and deliver on the city wharf one cargo of Sanford bricks at $9.00 per M., was accepted.

June 11th, the proposal of L. F. Pease Company to furnish and deliver 15,000 yards of 40-inch eleven ounce army duck at 20 5-8 cents per linear yard, was accepted.

June 26th, the following proposals for furnishing coal to the sewer department for one year to July 1, 1908, were accepted, viz.:

Providence Coal Co., New River run of mine, for Ernest street station, $4.50 per net ton, delivered.
" " New River lump, for Precipitation tanks, $5.25 per net ton, delivered.
" " anthracite, for Precipitation tanks, $6.90 per net ton, delivered.
" " New River run of mine, taken at yard, $4.20 per net ton.
" " New River lump, taken at yard, $4.95 per net ton.
Eastern Coal Co., for anthracite, taken at yard, $6.25 per net ton.

During the quarter, the construction of the following sewers was completed, namely:

No. of resolution.	Date of approval.		Date of completion.
68.	Feb. 7, 1905,	*Pleasant Valley Division, Section 31,* . .	Apr. 12, 1907.
209.	May 8, 1906,	*Veazie street, from its summit northwesterly to the sewer in Douglas avenue near Stansbury street, and from its summit southeasterly in Veazie street and Douglas avenue to present end of sewer about 270 feet west of Hawkins street,* . .	May 3, 1907.
210.	" "	*Plainfield street, from near Lowell avenue to Laurel Hill,* . .	June 7, 1907.

No. of resolution.	Date of approval.		Date of completion.
358.	Aug. 3, 1906,	*Mount Pleasant avenue, from Atwells to Dover street,* . . .	May 17, 1907.
"	" "	*Progress avenue, from Webster to Whitehall street,* . . .	June 11, 1907.

Work upon the following sewers was in progess at the close of the quarter, namely:

No. of resolution.	Date of approval.	
288.	Sept. 12, 1905,	*West River street, from Cross to Burke, and from West River street at Elk easterly through right of way about 530 feet to end of Section 22 of the improved sewerage system.*
122.	April 2, 1907,	*Montague street from Brenton avenue to Morris, and in Greenwood street from a point about 82 feet south of Atwells avenue to Manton.*
124.	" "	*Academy avenue from Justice street to Whitford avenue, and in Molloy street and Academy avenue from Rowan street to Justice.*
125.	April 2, 1907,	*Sterling avenue from Laurel Hill to Webster, Terrace avenue from Sterling to a point about 100 feet south of Dora street and in Magnolia street from near Webster avenue to Bancroft street.*

Work upon the following sewers completing the work ordered by the city council, had not commenced June 29, 1907, namely:

No. of resolution.	Date of approval.	
121.	April 2, 1907,	*Tell street from a point about 100 feet west of Vinton to a point about 40 feet east of Courtland.*

No. of resolution.	Date of approval.	
123.	April 2, 1907,	*Anthony avenue from Avon street to Cranston.*
211.	June 7, "	*Alverson avenue, from present end to Plainfield street.*
212.	" " "	*Berkeley street from Harold to River avenue.*
213.	" " "	*Eaton street, from summit at Roslyn to Douglas avenue.*
214.	" " "	*Elmhurst avenue and Smith street, from near Eaton street to present end of sewer in Smith.*
215.	" " "	*Lowell avenue, from Plainfield street to Hartford avenue.*

The amount of bills approved on account of sewers from April 1 to June 29, 1907, inclusive, was:

For construction, ... $51,015 17

Charged as follows:

Material	$9,477 31
Contract reservations	5,151 31
Additional catch basins	1,066 77
Testing cement	289 65
Sundries	118 53
Tools	56 64
Sewer in Academy avenue and Molloy street	1,756 86
Sewer in Montague and Greenwood streets	942 01
Sewer in Mount Pleasant avenue, from Atwells to Dover street	2,807 42
Sewer in Plainfield street, from near Lowell avenue to Laurel Hill	1,997 66
Sewer in Progress avenue, from Webster to White-Hall street	1,031 88
Sewer in Sterling and Terrace avenues and Magnolia street	4,790 89
Sewer in Veazie street and Douglas avenue	5,564 20
Sewer in West River street and in right of way	5,539 15
Sewer in Pleasant Valley Division, Section 31	10,424 89
	$51,015 17

For maintenance: $33,279 38

Classified as follows:

Cleaning basins and sewers	$8,751 69
Repairing basins and sewers	3,586 57
Horses, wagons, harnesses, etc	919 64
Inspection of connections	691 08
Tools	557 74
Barn expenses	511 82
Cleaning and repairing old drains	497 75
Salary, Superintendent	442 00
Repairs on gate houses	284 45
Sundries	187 52
Cleaning private connections	68 57
Filling cisterns, etc	67 50
Telephone line	44 18
Office expenses	32 37
Car fares	20 00
Repairs on buildings, sewer maintenance yard	14 04

Ernest Street Station.

Coal and wood	$1,494 16
Engineers	865 98
Fireman	729 33
Cleaning screens	704 76
Cleaning and repairing pumps	346 57
Care of grounds	125 92
Repairs on boilers	101 18
Repairs on engines	72 33
Supplies	54 93
Lights	27 75
Care of buildings	13 95
Repairs on buildings	12 60

Sewage Precipitation Tanks.

Chemicals	$5,130 68
Labor in sludge disposal	2,817 05
Miscellaneous supplies	1,651 00
Labor on sewage precipitation	1,552 37
Electrical power	563 00
Repairs on tanks	202 42
Repairs on buildings	55 26
Fuel	37 77
Lights	25 97
Repairs on machinery	17 48
	$33,279 38

The *net* expenditure for construction of sewers to June 29, 1907, inclusive, was $7,963,294 47

The *net* expenditure for maintenance of sewers to June 29, 1907, inclusive, was $1,451,007 63

Bills deposited with the city treasurer for collection from April 1 to June 29, 1907, inclusive, amounted to . . . $1,101 62

As follows:

Cleaning private connections	$99 58
One horse sold the highway department	50 00
Miscellaneous work	29 50
Pumping out cellars	12 00
Second-hand manhole frame and cover	3 75
Sewer material	902 89
Empty cement bags	3 90
	$1,101 62

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of $943 07

As follows:

Cleaning private connections	$92 33
One horse sold the highway department	50 00
Miscellaneous work	44 50
Pumping out cellars	22 00
Second-hand manhole frame and cover	3 75
Sewer material	730 49
	$943 07

HIGHWAYS.

Four permits to open streets were issued during the quarter.

Orders were given at various times, during the quarter, to the Connecticut Trap Rock Quarries, to furnish and deliver in the city yard an aggregate of 2,750 tons of crushed stone at $1.25 per ton.

May 2nd, the proposal of the Smith Granite Company to furnish and deliver in the city yard 20,000 granite blocks at $1.44 per square yard, was accepted.

June 26th, the following proposals for furnishing the coal required by the highway department for one year to July 1, 1908, were accepted, namely:

Providence Coal Co., New River, run of mine, $4.20, and lump, $4.95 per net ton, taken at the yard.
Eastern Coal Co., anthracite, taken at the yard, $6.25 per net ton.

June 28th, the proposal of the New England Granite Works to furnish and deliver in the city yard 15,000 granite blocks at $1.44 per square yard, was accepted.

June 29th, a statement of the cost of concreting sidewalks in sundry streets, with ten per centum added to cover the cost of assessing and collecting, was certified to the assessor of taxes in the sum of $2,609.91.

During the quarter the following work was completed:

SIDEWALKS CURBED AND GUTTERS PAVED.

Date of order.			
Aug.	2,	1906,	*Allens avenue, from Henderson street to Globe.*
Sept.	20,	"	*Kelly street, from the angle in said street to Bancroft.*
Nov.	15,	"	*McKinley street, from Elmwood avenue to Alger.*
Feb.	21,	1907,	*Melrose street, from Sumter to Sackett.*
"	"	"	*Lenox avenue, from Elmwood to Melrose street.*
March	21,.	"	*Chatham street, from Branch avenue to Silver Spring street.*

The following work was in progress June 29, 1907:

SIDEWALKS CURBED AND GUTTERS PAVED.

Date of order.			
Nov.	15,	1906,	*Mount Pleasant avenue, from Atwells to Dover street.*

Date of order.			
May	16,	1907,	*Abbott street, from Branch avenue to North Main street.*
"	"	"	*Union avenue, from Pocasset to Silver Lake.*

LAY OUT, EXTEND, WIDEN, AND IMPROVE.

Date of order.			
Aug.	3,	1906,	*Allens avenue and Eddy street.*

The following work, ordered by the board of aldermen and city council, had not commenced June, 29, 1907, namely:

SIDEWALKS CURBED AND GUTTERS PAVED.

Date of order.			
Nov.	15,	1906,	*Progress avenue, from Webster to Whitehall street.*
May	16,	1907,	*Wyatt street, from Plain to Eddy.*
"	"	"	*Niagara street, from Congress avenue to Lexington.*
"	"	"	*Anthony avenue, from Cranston street to its westerly termination.*
"	"	"	*Greenwood street, from Manton avenue to Atwells.*
"	"	"	*Tell street, from Vinton to Courtland.*
"	"	"	*Montague street, from Hope to Morris avenue.*

REBUILD WITH WARREN BROTHERS BITULITHIC PAVEMENT.

Date of order.			
May	17,	1907,	*Angell street, from Prospect to Wayland avenue.*

Bills approved on account of highways from April 1, to June 29, 1907, inclusive, amounted to:

Regular appropriation	$105,323 49	
Special appropriation	1,156 34	
		$106,479 83

Classified as follows:

Cleaning streets	$23,767 53	
Repairs on unpaved streets	19,372 98	
Stone, paving and crosswalk	13,162 91	
Crushed stone, material and labor	12,628 73	
Repairs on paved streets	10,394 06	
Barn expenses	3,214 09	
Blacksmith and wheelwright shop	2,458 06	
Watering streets	1,327 35	
Labor on material	728 96	
Tools, implements, etc	632 30	
Steam rollers, repairs and supplies	553 41	
Horses, wagons, harnesses, etc	458 23	
Superintendent's salary	442 00	
Fencing streets, material and labor	388 33	
Building driveways, etc	258 17	
Sundries	213 78	
Watchman at city yard	182 00	
Repairs on stone crushers	120 47	
Office expenses, city yard	116 08	
Carfares	30 00	
Telephone lines	5 60	
Repairs on buildings, highway yard	4 73	
		$90,459 77

New Work — Building and Rebuilding Streets, Etc.

Sidewalks Curbed and Gutters Paved.

Abbott street, from Branch avenue to North Main street	$83 98	
Chatham street, from Branch avenue to Silver Spring street	3,154 72	
Greenwood street, from Manton avenue to Atwells	51 96	
Kelly street, from angle in said street to Bancroft	1,117 88	
Lenox avenue, from Elmwood to Melrose street	1,216 15	
McKinley street, from Elmwood avenue to Alger	412 00	
Melrose street, from Sumter to Sackett	2,026 73	
Mount Pleasant avenue, from Atwells to Dover street	5,670 28	
Union avenue, from Pocasset to Silver Lake	1,130 02	
		14,863 72

Lay Out, Extend, Widen and Improve.

Allens avenue, and Eddy street	1,156 34
	$106,479 83

Bills deposited with the city treasurer for collection from April 1 to June 29, 1907, inclusive, amounted to $3,183 07

As follows:

Labor and material	$1,470 01
Blacksmith and harness work for other departments	938 20
Street sweepings	242 78
Building driveways, etc.	228 76
Boarding horses for other departments	180 08
Manure from barn	73 00
Removing snow and ice	46 24
Empty oil barrels	4 00
	$3,183 07

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of $1,879 14

As follows:

Blacksmith and harness work for other departments	$830 66
Labor and material	329 44
Street sweepings	212 53
Building driveways, etc.	203 19
Boarding horses for other departments	180 08
Manure from barn	73 00
Removing snow and ice	46 24
Empty oil barrels	4 00
	$1,879 14

SIDEWALKS AND CURBING.

Bills approved on account of sidewalks and curbing from April 1 to June 29, 1907, inclusive, amounted to $6,029 11

Charged as follows:

Granite curbing	$4,124 77
Concreting sidewalks	1,889 22
Repairing sidewalks and gutters	15 12
	$6,029 11

Bills deposited with the city treasurer for collection from April 1 to June 29, 1907, inclusive, amounted to $336 96

As follows:

Granite curbing	$266 65
Concreting sidewalks	70 31
	$336 96

During the quarter, coupons from bills collected have been returned by the city treasurer, and receipted for to the amount of $3,855 99

As follows:

Curbing bills	$3,582 84
Granite curbing	202 84
Concreting sidewalks	70 31
	$3,855 99

CITY ENGINEER.

Bills approved on account of the city engineer's department from April 1 to June 29, 1907, inclusive, amounted to $10,196 71

Charged as follows:

Salary — city engineer	$1,125 00
Salaries of assistants	7,649 33
Salaries of clerks	894 40
Supplies, drawing material, etc.	261 35
Car fares	202 20
Instruments and repairs	34 25
Telephone lines	26 28
Sundries	3 90
	$10,196 71

Bills deposited with the city treasurer for collection from April 1 to June 29, 1907, inclusive, amounted to		$55 00

As follows:

Sale of transits and tripod.....	$55 00	

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of .		$65 00

As follows:

Sale of transits and tripod.....	$55 00
One large city map.....	10 00
	$65 00

BRIDGES.

May 17th, the proposal of Tank and McKinnon to build a retaining wall at Point street bridge was accepted. The estimated cost of the work is $812.00.

June 7th, the proposal of the Narragansett Improvement Company to furnish and lay asphalt pavement upon Point street bridge for the sum of $1.50 per square yard, was accepted and a contract executed.

June 14th, the proposal of James H. Tower to furnish and erect at the approaches to Point street bridge about 280 linear feet of iron fence at $2.48 per foot, was accepted.

June 26th, the proposal of the Providence Coal Company to furnish the coal required for one year to July 1, 1908, was accepted as follows:

New River lump, $5.15 per net ton, delivered.
Anthracite, $6.90 per net ton, delivered.

Bills approved on account of bridges from April 1 to June 29, 1907, inclusive, amounted to $6,882.89

Charged as follows:

Barn expenses	$128 25
Car fares	25 00
Charles street railroad bridge	1 80
Crawford street bridge	7 25
Horses, wagons, harnesses, etc	226 13
Lumber, hardware, etc	1,525 27
Mill street bridge	13 35
Point street bridge	2,036 83
Post office bridge	7 30
Promenade street bridge	30 00
Randall street bridge	15 45
Red bridge	224 79
Rent of keeper's house — Washington bridge	36 00
Salaries — Point street bridge	978 25
Salaries — Red Bridge	513 50
Salaries — Washington bridge	513 50
Sundries	193 24
Telephone lines	2 68
Tools	110 90
Washington bridge	259 95
Washington row bridge	33 45
	$6,882 89

Bills deposited with the city treasurer for collection (for sale of one second-hand single harness), from April 1 to June 29, 1907, inclusive, amounted to . . . $3 00

During the quarter, coupons from bills collected (for sale of one second-hand single harness), have been returned by the city treasurer and receipted for to the amount of $3 00

Bills approved for account of rebuilding abutments, piers, and superstructure, Point street bridge, from April 1 to June 29, 1907, inclusive, have been paid from the special appropriation for that work to the amount of $41,346 29

PUBLIC LIGHTS.

Bills approved on account of the public lights from April 1 to June 29, 1907, inclusive, amounted to $69,095 95

Charged as follows:

Arc lights	$49,620 56
Incandescent lights	13,170 77
Welsbach lights	6,088 62
Salaries	216 00
	$69,095 95

Bills deposited with the city treasurer for collection from April 1 to June 29, 1907, inclusive, amounted to $117 50

As follows:

Lamp posts, lanterns and gasolene tanks	$111 50
Removing gas posts	6 00
	$117 50

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of $116 50

As follows:

Lamp posts, lanterns and gasolene tanks	$110 50
Removing gas posts	6 00
	$116 50

PUBLIC WORKS OFFICE.

Bills approved on account of the public works office from April 1 to June 29, 1907, inclusive, amounted to $5,406 99

Charged as follows:

Salaries of commissioner and secretary	$1,925 00
Salaries of office assistants	3,297 38
Office supplies	164 23
Telephone lines	20 38
	$5,406 99

CONTINGENCIES.

June 19th, the proposal of I. D. Achim, to furnish and deliver the ice required by the several drinking fountains during the season commencing July 1, 1907, at $2.25 per net ton, was accepted.

WALTER F. SLADE

Commissioner.

NINETY-NINTH

QUARTERLY REPORT

OF THE

Department of Public Works

OF THE

CITY OF PROVIDENCE, R. I.

QUARTER ENDING SEPTEMBER 30, 1907.

The Providence Press:
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1908

REPORT.

OFFICE OF THE DEPARTMENT OF PUBLIC WORKS,
CITY HALL, PROVIDENCE, R. I., October 1, 1907.

TO THE HONORABLE THE CITY COUNCIL:

In compliance with the requirements of Chapter 41 of the ordinances, the Commissioner of Public Works respectfully presents the ninety-ninth quarterly report of the expenditures by the several departments under his direction and control, with statements of work ordered and the condition and cost of same, for the quarter ending September 30, 1907.

WATER WORKS.

September 9th, the proposal of the Coffin Valve Company to furnish and deliver in the city yard 50 Providence pattern fire hydrants with boxes and covers, and 25 ball valves, relief valves, main stems, operating nuts and collars, was accepted. Amount $8,731.25.

September 23d, the proposal of the Estate of G. G. Hicks to furnish for the filter beds at Pettaconset 280 covers, 35¼ inches in diameter, for $2.82 each, and 420 covers, 33½ inches in diameter, for $1.93 each, was accepted.

The average daily consumption of water during the last quarter was 17,196,953 gallons.

Water pipes were laid during the quarter as follows:

8-INCH.

In Bosworth street and Laurel avenue; in Cranston and Narragansett streets; Dyer avenue and Narragansett boulevard in the town of Cranston	2,658.37 feet.

6-INCH.

In Clyde, Dora, Gray, Hereford, Montrose, Murray, Monticello, Newcomb, Opper, Sackett, Sorrento, and Tell streets; Elmdale, Humboldt, Progress, Radcliffe and Terrace avenues; in Elsie, Harry, Marcy, Pleasant, Queen, Weque and Winthrop streets; Roland and Terrace avenues in the town of Cranston; in Lyman and Park avenues in the town of Johnston	5,814.69 feet.
Total	8,473.06 feet.

or 1.604+ miles.

Water pipes were removed or abandoned during the quarter as follows:

12-INCH.

From Park avenue, in the town of Cranston	12.82 feet.

6-INCH.

From Antietam and Bissell streets; Arlington, Burnham and Harris avenues in the town of Cranston	348.60 feet.
Total	361.42 feet.

or .068+ mile.

Statement of sizes and lengths of pipe laid since the commencement of the work:

42-inch	25,630.70 feet.
36-inch	10,208.82 feet.
30-inch	61,410 07 feet.
24-inch	46,413.05 feet.
20-inch	9,626.59 feet.
16-inch	44,882.08 feet.
12-inch	114,827.20 feet.
10-inch	15,062.78 feet.
8-inch	311,935.08 feet.
6-inch	1,286,356.81 feet.
Total	1,926,353.18 feet.

or, 364.839+ miles.

Water pipes were laid during the quarter for the special water service for fire protection, as follows:

16-INCH.

In Broadway; Helme, Troy and Valley streets; Harris and Manton avenues	5,003.57 feet.

12-INCH.

In Olneyville square; Troy street and Manton avenue	1,646.44 feet.
Total	6,650.01 feet.

or 1.259+ miles.

Statement of sizes and lengths of pipe laid for the special water service for fire protection since the commencement of the work.

24-inch	4,297.46 feet.
16-inch	33,571.69 feet.
12-inch	4,897.07 feet.
Total	42,766.22 feet.

or 8.099 + miles.

Twenty fire hydrants were set during the quarter, one in each of the following locations, viz:

Aborn street, Cranston, north side, 5 feet east of Broad street.
Albert avenue, Cranston, north side, 196 feet west of Narragansett boulevard.
Alverson avenue, west side, 368 feet north of Eastwood avenue.
Chapin avenue, north side, 122 feet west of Ellery street.
Chalkstone avenue, northeast corner of Rowan street.
Dora street, northeast corner of Priscilla avenue.
Herschel street, east side, 15 feet south of Klondike street.
Huntington avenue, east side, 3 feet north of Rosedale street,
Huntington avenue, east side, 3 feet north of Hudson street.
Manton avenue, north side, 84 feet east of gate at Chalkstone avenue.
Merino avenue, east side, on south line of Saxe street.
Monticello street, north side, 296 feet east of Opper street.
Narragansett boulevard, Cranston, east side, 681 feet south of Armington street
Rye street, east side, on north line of Dorchester avenue.
Roland avenue, Cranston, northeast corner of Cato street.
Smith street, Cranston, north side, at northeast corner of Broad street.
Swiss street, at northeast corner of Ridge street.
Wallace street, at northeast corner of Priscilla avenue.
Wendell street, north side, 240 feet east of Messer street,
Wood street, north side, 257 feet east of Ellery street.

The total number of fire hydrants, exclusive of those for special service for fire protection, is now two thousand one hundred and thirty-six — nineteen hundred and ninety-six flush, and one hundred and forty post.

Seven fire hydrants were set on the special water service for fire protection, one in each of the following locations, viz.:

Harris avenue, north side, on west line of Sims avenue.
Harris avenue, west side, 117 feet south of Atwells avenue.
Harris avenue, west side, 505 feet south of Atwells avenue.
Helme street, north side, 26 feet east of Valley street.
Valley street, east side, 26 feet north of Grove street.
Valley street, east side, 45 feet south of Delaine street.
Valley street, east side, 138 feet north of Esther street.

The total number of fire hydrants on the special water service for fire protection is one hundred and ten.

During the quarter two hundred and thirty-one water meters were set, of which number thirty-seven were to replace other meters. The use of seven meters was discontinued.

The following meters were in use at the close of the quarter:

Kind.	Size.									Total.
	⅝-in.	¾-in.	1-in.	1½-in.	2-in.	3-in.	4-in.	6-in.	8-in.	
Ball & Fitts	1,605	328	76	9	4	.....	.....	.....	.....	2,022
Ball & Fitts, rotary	.....	.....	4	4	.....	1	1	.....	.....	10
Crown	9,913	1,306	382	171	50	33	29	1	.....	11,885
Empire	1,762	208	88	57	15	1	1	.....	.....	2,132
Fales, Jenks & Sons	.....	.....	1	.....	.....	.....	.....	.....	.....	1
Gem	.....	.....	.....	.....	17	35	19	4	.....	75
Hersey	29	.....	.....	.....	.....	.....	.....	.....	.....	29
Nash	471	.....	.....	.....	.....	.....	.....	.....	.....	471
Thomson	5,003	424	74	54	20	7	7	1	.....	5,590
Trident	103	.....	1	.....	.....	.....	.....	.....	.....	104
Venturi	.....	.....	.....	.....	.....	.....	.....	.....	1	1
	18,886	2,266	626	295	106	77	57	6	1	22,320

One plumber's license was issued during the quarter making the total number one hundred and thirty-one, all of which expire December 31, 1907.

Seven hundred and thirty-five permits to do plumbing were issued during the quarter.

Two hundred and eleven applications for water were made during the quarter, making the total number twenty-eight thousand five hundred and eighteen.

The number of new service stops opened during the quarter was two hundred and seven.

The total number of service stops opened to September 30, 1907, inclusive, was twenty-seven thousand eight hundred and five. The number in actual use September 30, 1907, was twenty-five thousand six hundred and forty-five.

The amount of bills approved on account of water works from July 1, to September 30, 1907, inclusive, was:

For maintenance, ... $100,945 12

Classified as follows:

PETTACONSET PUMPING STATION.

Coal and wood	$5,884 65	
Firemen	983 43	
Sundries	803 74	
Engineers	648 64	
Superintendence	451 71	
Allis-Chalmers high-duty engine	355 80	
Oil, waste and packing	258 53	
Care of grounds	185 64	
Barn expenses	88 79	
Labor on fuel	75 60	
Repairs on boilers	39 20	
Cornish engine-house	32 76	
Real estate	22 82	
Lights	21 88	
Horses, wagons, harnesses, etc	5 35	
Amount carried forward		$9,858 54

Amount brought forward		$9,858 54
Sand Filtration Plant.		
Installation	34,538 75	
Cleaning beds	3,052 24	
Labor and supplies, pumping	2,275 94	
Laboratory, labor and supplies	599 24	
Miscellaneous supplies	410 52	
		40,876 69
Sockanosset Reservoir.		
Watchman	$186 00	
Sundries	41 58	
		227 58
Hope Pumping Station.		
Coal and wood	$2,700 78	
Firemen	503 64	
Engineers	323 57	
Sundries	214 24	
Lights	47 12	
Oil, waste and packing	20 02	
		3,809 37
Hope Reservoir.		
Sundries	$1,692 03	
Watchman	209 25	
		1,901 28
Fruit Hill Reservoir.		
Sundries	$451 38	
Watchman	186 00	
		637 38
Meter Department.		
Water meters	$2,827 96	
Setting and repairing meters	1,693 86	
		4,521 82
Pipe Line and Service Stops.		
Repairs	$4,553 83	
Salaries of assistant engineers	1,831 92	
Inspection of pipe line and services	1,130 76	
Superintendence—salaries	926 76	
		8,443 27
Amount carried forward		$70,275 93

Amount brought forward		$70,275 93

PIPE YARD.

Special water service for fire protection	$12,047 65	
Cast iron water pipe	5,617 48	
Laying water pipe	4,392 31	
Laying service pipe	1,992 86	
Service pipe	572 05	
Special castings	370 48	
Labor on and carting pipe	356 01	
Leading main from Sockanosset to city — to lay	312 44	
Tools	256 94	
Repairs on pipe yard buildings	181 11	
Pig lead and tin	41 18	
Pipe yard office expenses	10 92	
Leak in Washington street main	6 67	
Fire hydrants, boxes and covers	2 23	
		26,160 33

MISCELLANEOUS.

Clerks' and inspectors' salaries	$1,785 47	
Horses, wagons, harnesses, etc	983 04	
Barn expenses	607 96	
Sundries	356 93	
Prevention of defilement of the Pawtuxet	300 00	
Car fares	160 00	
Telephone lines	153 93	
Public drinking fountains and troughs	120 03	
Real estate in Lincoln	37 50	
Inspection of water pipes with reference to electrolysis	4 00	
		4,508 86
		$100,945 12

The total expenditures to September 30, 1907, inclusive, was . . . $11,223,269 87

The *net* expenditure for maintenance from July 1 to September 30, 1907, inclusive was	$93,135 79
The *net* expenditure for maintenance to September 30, 1907, inclusive, was	$3,437,801 07

The value of the water works system January 1, 1907, as estimated by the city engineer, was as follows:

Pettaconset pumping station	$340,694 00	
Hope pumping station	117,903 11	
Sockanosset, Hope and Fruit Hill reservoirs	683,982 39	
Main lines and distribution pipes	2,828,178 21	
Real estate in Pawtuxet and Lincoln	15,975 00	
Tools and supplies	53,629 26	
		$4,040,361 97

Bills deposited with the city treasurer for collection from July 1 to September 30, 1907, inclusive, amounted to . . . $111,137 44

As follows:

Water	$102,920 52	
Water meters	3,594 00	
Setting and repairing meters	2,623 94	
Labor and material, laying services, etc	1,806 84	
Rent of real estate	100 50	
Penalties	50 00	
Repairs on pipe lines	26 64	
Permanently closing service stops	15 00	
		$111,137 44

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of . $100,284 98

As follows:

Water	$92,423 65	
Water meters	3,535 50	
Setting and repairing meters	2,260 11	
Labor and material, laying services, etc	1,879 08	
Rent of real estate	88 00	
Penalties	52 00	
Repairs on pipe line	26 64	
Permanently closing service stops	20 00	
		$100,284 98

The amount of bills approved on account of water works for the fiscal year ending September 30, 1907, inclusive, was:

For maintenance $512,261 01

Classified as follows:

PETTACONSET PUMPING STATION.

Coal and wood	$17,996 92	
Firemen	3,862 82	
Sundries	3,388 77	
Engineers	2,420 24	
Real estate	2,031 41	
Superintendence	1,777 71	
Worthington high-duty engine	786 12	
Oil, waste and packing	715 45	
Care of grounds	627 29	
Repairs on boilers	598 33	
Allis-Chalmers high-duty engine	509 19	
Cornish engine-house	416 87	
Labor on fuel	369 25	
Barn expenses	317 40	
Corliss pumping engine and house	246 20	
Lights	126 08	
Horses, wagons, harnesses, etc.	25 84	
		$36,215 89

SAND FILTRATION PLANT,

Installation	$121,816 11	
Cleaning beds	26,000 37	
Labor and supplies, pumping	7,788 34	
Miscellaneous supplies	3,667 66	
Laboratory—labor and supplies	2,253 56	
		161,526 04

SOCKANOSSET RESERVOIR.

Watchman	$732 00	
Sundries	573 99	
		1,305 99

HOPE PUMPING STATION.

Coal and wood	$4,502 75	
Firemen	1,816 20	
Engineers	1,261 71	
Sundries	860 59	
Lights	208 24	
Repairs on boilers	58 45	
Oil, waste and packing	41 64	
Holly pumping engine	14 63	
		8,764 21

HOPE RESERVOIR.

Sundries	$3,394 56	
Watchman	823 50	
		4,218 06

Amount carried forward	$212,030 19

Amount brought forward		$212,030 19
Fruit Hill Reservoir.		
Sundries	$1,632 25	
Watchman	732 00	
		2,364 25
Meter Department.		
Water meters	$19,337 33	
Setting and repairing meters	6,967 65	
		26,304 98
Pipe Line and Service Stops.		
Repairs	$17,951 72	
Salaries of assistant engineers	7,175 42	
Inspection of pipe line and services,	5,210 13	
Superintendence — salaries	3,624 13	
		33,961 40
Pipe Yard.		
Cast iron water pipe	$101,332 59	
Laying water pipe	31,123 46	
Special water service for fire protection	30,183 34	
Leading main from Sockanosset to city — to lay	20,240 56	
Laying service pipe	6,576 97	
Special castings	6,101 63	
Service pipe	3,857 68	
Stop valves	2,729 43	
Leak in Washington street main	1,622 47	
Taps and stops	1,610 07	
Pig lead and tin	1,551 11	
Tools	1,396 80	
Labor on and carting pipe	1,270 17	
Fire hydrants, boxes and covers	1,039 94	
Pipe yard, office expenses	211 09	
Repairs on pipe yard buildings	185 11	
Thawing out water pipe	113 24	
		211,145 66
Miscellaneous.		
Town of Cranston tax	$9,616 62	
Clerks' and inspectors' salaries	7,163 92	
Barn expenses	2,847 29	
Horses, wagons, harnesses, etc	1,936 62	
Prevention of defilement of the Pawtuxet	1,417 73	
Car fares	685 00	
Public drinking fountains and troughs	654 38	
Inspection of water pipe with reference to electrolysis	620 93	
Telephone lines	589 09	
Sundries	417 95	
Town of North Providence tax	400 00	
Real estate in Pawtuxet	67 50	
Real estate in Lincoln	37 50	
		26,454 53
		$512,261 01

SEWERS.

Two drain layer's licenses were issued during the quarter, making the total number one hundred and forty-one, all of which expire December 31, 1907.

During the quarter, three hundred and thirty-eight permits were issued to drain layers — one hundred and fifty-six for new work and one hundred and eighty-two for extensions and repairs of drains.

July 30th, contracts for the construction of sewers were awarded to the following parties and subsequently executed namely:

[The amounts given below are what are estimated will be paid the contractors for labor, and do not include the cost of inspection and materials.]

To Charles Crankshaw.

No. of resolution.	Date of approval.		
211.	June 7, 1907,	*Alverson avenue, from present end to Plainfield street,*	$493 70
212.	" " "	*Berkley street, from Harold to River avenue,* .	260 60
215.	" " "	*Lowell avenue, from Plainfield street to Hartford avenue,* . .	2,095 60
255.	July 2, "	*Hillside avenue, from summit in Hillside avenue to North Main street,* .	675 10

To Frederick E. Shaw.

213.	June 7, 1907,	*Eaton street, from summit at Roslyn to Douglas avenue,*	3,019 35

No. of resolution.	Date of approval.		
214.	June 7, 1907,	*Elmhurst avenue and Smith street, from near Eaton street to present end of sewer in Smith,* .	$449 00
253.	July 2, "	*Laurel avenue, from Lorraine street to Blackstone boulevard,* . . .	222 50
254.	" " "	*Elmgrove avenue, from Sessions street to Savoy; and in Savoy from Elmgrove avenue to Morris,* .	6,029 10

During the quarter, the proposal of James C. Goff Company to furnish and deliver on the city wharf two cargoes of Sanford bricks at $9.50 per M., was accepted.

September 28th, a contract with Charles Crankshaw was executed for building a sewer in Gano and East George streets and Wayland avenue entirely at the expense of the New York, New Haven and Hartford Railroad Company, as said sewer was necessitated by the construction of the railroad company's tunnel. Amount, ... $1,578.20

During the quarter, the construction of the following sewers was completed, namely:

No. of resolution.	Date of approval.		Date of completion
121.	April 2, 1907,	*Tell street, from a point about 100 feet west of Vinton to a point about 40 feet east of Courtland,*	Sept. 7, 1907

No. of resolution.	Date of approval.		Date of completion.
122.	April 2, 1907,	*Montague street, from Brenton avenue to Morris, and in Greenwood street, from a point about 82 feet south of Atwells avenue to Manton,* . .	Aug. 14, 1907.
123.	" " "	*Anthony avenue, from Avon street to Cranston,*	July 23, 1907.
212.	June 7, "	*Berkley street from Harold to River avenue,*	Sept. 11, 1907.

Work upon the following sewers was in progess at the close of the quarter, namely:

No. of resolution.	Date of approval.	
288.	Sept. 12, 1905,	*West River street, from Cross to Burke, and from West River street at Elk easterly through right of way about 530 feet to end of Section 22 of the improved sewerage system.*
124.	" "	*Academy avenue, from Justice street to Whitford avenue, and in Molloy street and Academy avenue, from Rowan street to Justice.*
125.	April 2, 1907,	*Sterling avenue, from Laurel Hill to Webster, Terrace avenue, from Sterling to a point about 100 feet south of Dora street, and in Magnolia street, from near Webster avenue to Bancroft street.*
213.	June 7, 1907,	*Eaton street, from summit at Roslyn to Douglas avenue.*
253.	July 2, "	*Laurel avenue, from Lorraine street to Blackstone boulevard.*
255.	" " "	*Hillside avenue, from summit in Hillside to North Main street.*

Work upon the following sewers, completing the work ordered by the city council, had not commenced September 30, 1907, namely:

No. of resolution.	Date of approval.	
211.	June 7, 1907,	*Alverson avenue, from present end to Plainfield street.*
214.	" " "	*Elmhurst avenue and Smith street, from near Eaton to present end of sewer in Smith.*
215.	June 7, 1907,	*Lowell avenue, from Plainfield street to Hartford avenue.*
254.	July 2, "	*Elmgrove avenue, from Sessions street to Savoy, and in Savoy, from Elmgrove avenue to Morris.*
256.	" " "	*Academy avenue, from Smith street to Whitford avenue.*

The amount of bills approved on account of sewers from July 1 to September 30, 1907, inclusive, was:

For construction, ... $20,398 78

Charged as follows:

Material	$4,175 21
Additional catch-basins	1,181 57
Testing cement	291 22
Sundries	121 00
Tools	2 25
Sewer in Academy avenue and Molloy street	3,525 94
Sewer in Anthony avenue, from Avon street to Cranston	398 99
Sewer in Berkley street, from near Harold to River avenue	249 60
Sewer in Eaton street, from summit at Roslyn to Douglas avenue	384 75
Sewer in Hillside avenue, from summit in Hillside avenue to North Main street	151 48
Sewer in Laurel avenue, from Lorraine street to Blackstone boulevard	350 68
Amount carried forward	$10,832 69

Amount brought forward	$10,832 69
Sewer in Montague and Greenwood streets	879 74
Sewer in Sterling and Terrace avenues and Magnolia street	3,583 85
Sewer in Tell street from near Vinton to Courtland	1,080 53
Sewer in Veazie street and Douglas avenue	1,199 76
Sewer in West River street and in right of way	2,582 21
Sewer in Pleasant Valley Division, Section 31	240 00
	$20,398 78

For maintenance: $38,957 40

Classified as follows:

Cleaning basins and sewers	$6,864 76
Repairing basins and sewers	3,660 97
Sundries	1,606 15
Cleaning and repairing old drains	891 57
Inspection of connections	698 96
Salary, superintendent	451 71
Tools	422 31
Barn expenses	364 28
Horses, wagons, harnesses, etc	245 19
Repairs on gate houses	128 56
Telephone lines	44 18
Cleaning private connections	39 05
Office expenses	14 29
Car fares	10 00
Repairs on buildings, sewer maintenance yard	6 18

ERNEST STREET STATION.

Repairs on boilers	4,468 32
Coal and wood	1,279 96
Engineers	887 33
Firemen	714 81
Cleaning and repairing pumps	712 80
Cleaning screens	666 72
Repairs on buildings	209 76
Care of grounds	178 40
Supplies	119 97
Repairs on engines	49 31
Lights	12 22
Care of buildings	1 44

SEWAGE PRECIPITATION TANKS.

Chemicals	6,482 40
Labor in sludge disposal	2,890 10
Amount carried forward	$34,121 70

Amount brought forward	$34,121 70
Miscellaneous supplies	1,754 98
Labor on sewage precipitation	1,551 81
Fuel	1,010 54
Electrical power	466 50
Repairs on buildings	25 50
Lights	13 26
Repairs on machinery	10 44
Repairs on tanks	2 67
	$38,957 40

The *net* expenditure for construction of sewers to September 30, 1907, inclusive, was $7,983,236 16

The *net* expenditure for maintenance of sewers to Sepeember 30, 1907, inclusive, was $1,489,458 17

Bills deposited with the city treasurer for collection from July 1 to September 30, 1907, inclusive, amounted to . . . **$1,511 92**

As follows:

Miscellaneous work	$1,139 68
Cleaning private connections	83 25
Pumping out cellar	4 75
Second-hand manhole frame and cover	3 45
Sewer material	280 79
	$1,511 92

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of **$963 95**

As follows:

Miscellaneous work	$401 91
Cleaning private connections	96 75
Pumping out cellar	4 75
Second-hand manhole frame and cover	3 45
Sewer material	453 19
Empty cement bags	3 90
	$963 95

The amount of bills approved on account of sewers for the fiscal year ending September 30, 1907, inclusive, was as follows:

For construction, ... $94,951 46

Charged as follows:

Material	$16,778 81
Contract reservations	5,615 31
Additional catch-basins	2,771 60
Testing cement	1,158 93
Sundries	845 17
Tools	126 53
Sewer in Academy avenue and Molloy street	5,282 80
Sewer in Anthony avenue, from Avon street to Cranston	398 99
Sewer in Berkley street, from near Harold to River avenue	249 60
Sewer in Eaton street, from summit at Roslyn to Douglas avenue	384 75
Sewer in Exchange place, in front of new post office building	1,320 34
Sewer in Hillside avenue, from summit in Hillside avenue to North Main street	151 48
Sewer in Laurel avenue, from Lorraine street to Blackstone boulevard	350 68
Sewer in McKinley street, from Elmwood avenue to Alger	679 31
Sewer in Montague and Greenwood streets	1,821 75
Sewer in Mount Pleasant avenue, from Atwells to Dover street	3,688 04
Sewer in Plainfield street, from near Lowell avenue to Laurel Hill	1,997 66
Sewer in Plenty, Linden and Sorrento streets	223 18
Sewer in Progress avenue, from Webster to Whitehall street	1,031 88
Sewer in Sterling and Terrace avenues and Magnolia street	8,374 74
Sewer in Tell street, from near Vinton to Courtland	1,080 53
Sewer in Veazie street and Douglas avenue	8,365 05
Sewer in Waterloo street, from near Parade to Dexter	55 95
Sewer in West River street, and in right of way	12,356 36
Sewer in Pleasant Valley Division Section 31	19,842 02
	$94,951 46

For maintenance, ... $132,833 93

Classified as follows:

Cleaning basins and sewers	$30,366 04
Repairing baisins and sewers	12,651 95
Sundries	2,929 08
Inspection of connections	2,695 20
Cleaning and repairing old drains	2,378 45
Tools	2,350 68
Salary, superintendent	1,777 71
Barn expenses	1,732 40
Horses, wagons, harnesses, etc	1,719 81
Use of water	900 00
Repairs on gate houses	413 46
Office expenses	246 78
Telephone lines	175 72
Cleaning private connections	163 84
Filling cisterns, etc	85 35
Car fares	60 00
Repairs on buildings, sewer maintenance yard	20 22

ERNEST STREET STATION.

Coal and wood	5,924 02
Repairs on boilers	4,622 12
Engineers	3,584 76
Cleaning screens	2,720 69
Firemen	2,392 21
Cleaning and repairing pumps	2,023 75
Care of grounds	443 37
Repairs on engines	416 54
Repairs on buildings	341 82
Supplies	307 21
Lights	123 47
Care of buildings	112 63

SEWAGE PRECIPITATION TANKS.

Chemicals	21,280 62
Labor in sludge disposal	10,598 58
Miscellaneous supplies	6,271 05
Labor on sewage precipitation	5,955 52
Electrical power	2,132 00
Fuel	1,561 83
Repairs on buildings	894 50
Repairs on tanks	223 10
Lights	120 88
Repairs on machinery	116 57
	$132,833 93

HIGHWAYS.

Two permits to open streets were issued during the quarter.

July 9th, a contract was executed with Warren Brothers Company for laying bitulithic pavement in Waterman street, from Prospect to Cooke, and in Angell street, from Prospect to Wayland avenue, at $2.25 per square yard.

Orders were given at various times, during the quarter, to the Connecticut Trap Rock Quarries, to furnish and deliver in the city yard an aggregate of 4,500 tons of crushed stone at $1.25 per ton.

August 7th, a schedule of unpaid curbing bills amounting to $11,313.57 was certified to the assessors of taxes for collection.

August 15th, the proposal of the Citizens Concrete Company for laying about 3,725 square yards of concrete sidewalk in Brown, Olney, Promenade and Eddy streets, for the sum of 39¾ cents per yard, was accepted.

During the quarter, the proposals of the following parties to furnish and deliver in the city yard granite blocks at $1.44 per square yard, were accepted, namely:

Sweeney Granite Works for 70,000 blocks.
Booth Brothers and Hurricane Isle Granite Company for 260,000 blocks.

August 31st, the proposal of the Smith Granite Company to furnish and deliver in the city yard 50,000 granite blocks at $1.44 per square yard, was accepted.

During the quarter the following work was completed:

SIDEWALKS CURBED AND GUTTERS PAVED.

Date of order.			
Nov.	15,	1906,	*Mount Pleasant avenue, from Atwells to Dover street.*
"	"	"	*Progress avenue, from Webster to Whitehall street.*
May	16,	1907,	*Abbott street, from Branch avenue to North Main street.*
"	"	"	*Niagara street, from Congress avenue to Lexington.*
"	"	"	*Anthony avenue, from Cranston street to its westerly termination.*
"	"	"	*Greenwood street, from Manton avenue to Atwells.*
"	"	"	*Union avenue, from Pocasset to Silver Lake.*
"	"	"	*Montague street, from Hope to Morris avenue.*
August	1,	"	*Niagara street, from Lexington avenue to Atlantic.*
"	"	"	*Humboldt avenue, from Wayland to Elton street.*

LAY OUT, EXTEND, WIDEN, AND IMPROVE.

Date of order.			
Aug.	3,	1906,	*Allens avenue and Eddy street.*

The following work was in progress September 30, 1907:

SIDEWALKS CURBED AND GUTTERS PAVED.

Date of order.			
May	16,	1907,	*Tell street, from Linton to Courtland.*
Sept.	19,	"	*Berkley street, from River avenue to Harold street.*

REBUILD WITH WARREN BROTHERS BITULITHIC PAVEMENT.

Date of order.			
May	17,	1907,	*Angell street, from Prospect to Wayland avenue.*
July	2,	1907,	*Waterman street, from Prospect to Cooke.*

The following work, ordered by the board of aldermen and city council, had not commenced September 30, 1907, namely.

SIDEWALKS CURBED AND GUTTERS PAVED.

Date of order.			
May	16,	1907,	*Wyatt street, from Plain to Eddy.*
August	1,	"	*Terrace avenue, from Laurel Hill to the the city line.*
Sept.	19,	"	*Hamilton street, from Adelaide avenue to Lenox.*

Bills approved on account of highways from July 1, to September 30, 1907, inclusive, amounted to:

Regular appropriation	$122,265 74	
Special appropriation	4,716 36	
		$126,982 10

Classified as follows:

Cleaning streets	$23,094 99
Repairs on unpaved streets	21,504 83
Crushed stone, material and labor	13,642 52
Stone, paving and crosswalk	5,839 69
Repairs on paved streets	4,103 71
Blacksmith and wheelwright shop	2,456 19
Barn expenses	2,391 97
Repairs on stone crushers	2,077 79
Watering streets	1,793 51
Tools, implements, etc	1,141 87
Labor on material	615 94
Steam rollers, repairs and supplies	609 88
Building driveways, etc	513 71
Amount carried forward	$79,786 60

Amount brought forward	$79,786 60	
Superintendent's salary	451 71	
Horses, wagons, harnesses, etc	373 10	
Sundries	307 11	
Watchman at city yard	184 00	
Fencing streets, material and labor	166 43	
Repairs on buildings, highway yard	85 98	
Carfares	30 00	
Office expenses, city yard	15 02	
Telephone lines	5 60	
		$81,405 55

New Work — Building and Rebuilding Streets, Etc.

Sidewalks Curbed and Gutters Paved.

Abbott street, from Branch avenue to North Main street	$298 13	
Anthony avenue, from Cranston street to its westerly termination	1,361 62	
Berkley street, from River avenue to Harold street.	366 90	
Greenwood street, from Manton avenue to Atwells.	1,950 86	
Humboldt avenue, from Wayland to Elton street	2,258 49	
Mount Pleasant avenue, from Atwells to Dover street	1,446 54	
Montague street, from Hope to Morris avenue	3,009 03	
Niagara street, from Congress avenue to Lexington	503 82	
Niagara street, from Lexington avenue to Atlantic	777 28	
Progress avenue, from Webster to Whitehall street.	2,360 95	
Tell street, from Vinton to Courtland	866 56	
Terrace avenue, from Laurel Hill to the city line	778 06	
Union avenue, from Pocasset to Silver Lake	3,945 88	
		19,924 12

Rebuild with Warren Brothers Bitulithic Pavement.

Angell street, from Prospect to Wayland avenue	$5,078 64	
Waterman street, from Prospect to Cooke	15,857 43	
		20,936 07

Lay Out, Extend, Widen and Improve.

Allens avenue and Eddy street	$4,715 36
	$126,982 10

Bills deposited with the city treasurer for collection from July 1, to September 30, 1907, inclusive, amounted to . . . $18,494 16

As follows:

Labor and material	$12,743 66
The N. Y. N. H. and H. R. R. Company for granite blocks, etc., in Allen's avenue	3,695 08
Blacksmith and harness work for other departments	808 78
Building driveways, etc	485 84
Street sweepings	294 07
Boarding horses for other departments	276 96
One horse sold the water department	75 00
Manure from barn	73 00
Removing tree	15 00
Empty tar barrels	15 00
Sale of old brass	10 22
Sale of old rubber belting	2 00
	$18,494 61

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of $15,762 90

As follows:

Labor and material	$13,813 83
Blacksmith and harness work for other departments	938 20
Building driveways, etc	358 77
Boarding horses for other departments	276 96
Street sweepings	184 92
One horse sold the water department	75 00
Manure from barn	73 00
Removing tree	15 00
Empty tar barrels	15 00
Sale of old brass	10 22
Sale of old rubber belting	2 00
	$15,762 90

Bills approved on account of highways for the fiscal year, ending September 30, 1907, inclusive, amounted to:

Regular appropriation	$370,795 91	
Special appropriation	32,176 29	
		$402,972 20

Classified as follows:

Cleaning streets	$68,677 41	
Repairs on unpaved streets	58,455 68	
Repairs on paved streets	46,599 50	
Crushed stone—material and labor	46,206 44	
Stone — paving and crosswalk	21,948 34	
Removing snow and ice	18,587 54	
Blacksmith and wheelwright shop	10,970 98	
Barn expenses	10,810 28	
Tools, implements, etc	5,609 04	
Repairs on stone crushers	3,745 15	
Watering streets	3,667 80	
Steam rollers—repairs and supplies	3,663 42	
Labor on material	2,489 49	
Superintendent's salary	1,777 71	
Horses, wagons, harnesses, etc	1,558 09	
Sundries	1,249 26	
Building driveways, etc	1,223 25	
Fencing streets—material and labor	853 86	
Watchman at city yard	704 00	
Office expenses, city yard	286 61	
Repairs on buildings, highway yard	179 96	
Car fares	105 00	
Telephone lines	22 40	
		$309,391 21

New Work—Building and Rebuilding Streets, Etc.

Sidewalks Curbed and Gutters Paved.

Abbott street, from Branch avenue to North Main street	$382 11	
Anthony avenue, from Cranston street to its westerly termination	1,361 62	
Berkley street, from River avenue to Harold street	396 90	
Cedar street, from Acorn to West Exchange	849 99	
Chatham street, from Branch avenue to Silver Spring street	3,154 72	
Elton street, from Wayland avenue to Humboldt	620 98	
Eudora street, from Eddy to Poe	461 43	
Greenwood street, from Manton avenue to Atwells	2,002 82	
Humboldt avenue, from Wayland to Elton street	2,258 49	
Kelly street, from angle in said street to Bancroft	1,117 88	
Lenox avenue, from Elmwood to Melrose	1,384 60	
McKinley street, from Elmwood avenue to Alger	1,441 09	
Melrose street, from Sumter to Sackett	2,081 27	
Montague street, from Hope to Morris avenue	3,009 03	
Amounts carried forward	$20,492 93	$309,391 21

Amounts brought forward	$20,492 93	$309,391 21
Mount Pleasant avenue, from Atwells to Dover street	7,116 82	
Niagara street, from Congress avenue to Lexington	503 82	
Niagara street, from Lexington avenue to Atlantic	777 28	
Poe street, from Rhodes to Public	695 98	
Progress avenue, from Webster to Whitehall street	2,360 95	
Sackett street, from Elmwood avenue to Melrose street	860 22	
Sorrento street, from Union avenue to Waverly street	940 11	
Tell street, from Vinton to Courtland	866 56	
Terrace avenue, from Laurel Hill to the city line	778 06	
Union avenue, from Pocasset to Silver Lake	5,075 90	
		40,468 63

REBUILD WITH WARREN BROTHERS BITULITHIC PAVEMENT.

Angell street, from Prospect to Wayland avenue	$5,078 64	
Waterman street, from Prospect to Cooke	15,857 43	
		20,936 07

REMOVE OBSTRUCTIONS, GRADE AND PUT IN GOOD CONDITION.

Crawford street, from South Water to South Main, and South Main street, from Crawford to Planet,	12,262 40

LAY OUT, EXTEND, WIDEN AND IMPROVE.

Allens avenue, and Eddy street	19,913 89
	$402,972 20

SIDEWALKS AND CURBING.

Bills approved on account of sidewalks and curbing from July 1 to September 30, 1907, inclusive, amounted to . . . $9,915 73

Charged as follows:

Granite curbing	$8,086 92
Concreting sidewalks	1,167 83
Repairing sidewalks and gutters	660 98
	$9,915 73

Bills deposited with the city treasurer for collection (for granite curbing), from July 1 to September 30, 1907, inclusive, amounted to $684 17

During the quarter, coupons from bills collected have been returned by the city treasurer, and receipted for to the amount of $3,167 98

As follows:

Curbing bills	$2,433 25
Granite curbing	734 73
	$3,167 98

Bills approved on account of sidewalks and curbing for the fiscal year ending September 30, 1907, inclusive, amounted to . $22,114 32

Charged as follows:

Granite curbing	$16,081 10
Concreting sidewalks	5,202 12
Repairing sidewalks and gutters	831 10
	$22,114 32

CITY ENGINEER.

Bills approved on account of the city engineer's department from July 1 to September 30, 1907, inclusive, amounted to $11,916 56

Charged as follows:

Salary — city engineer	$1,125 00
Salaries of assistants	8,105 86
Salaries of clerks	904 22
Instruments and repairs	653 54
Carfares	602 65
Supplies, drawing material, etc	466 94
Meteorological instruments and repairs	30 32
Telephone lines	26 28
Sundries	1 75
	$11,916 56

Bills approved on account of the city engineer's department, for the fiscal year ending September 30, 1907, inclusive, amounted to $42,335 40

Charged as follows:

Salary—city engineer	$4,500 00
Salaries of assistants	31,079 15
Salaries of clerks	3,516 72
Carfares	1,210 45
Supplies, drawing material, etc	1,157 01
Instruments and repairs	712 14
Telephone lines	103 96
Meteorological instruments and repairs	46 82
Sundries	9 15
	$42,335 40

BRIDGES.

Bills approved on account of bridges from July 1 to September 30, 1907, inclusive, amounted to $7,597.77

Charged as follows:

Atwells avenue bridge	$179 50
Barn expenses	90 14
Branch avenue bridge	26 90
Branch avenue culvert	13 96
Building at city yard	19
Cemetery street bridge	60 53
Crawford street bridge	52 72
Gaspee street bridge	91 21
Geneva bridge	30 38
Horses, wagons, harnesses, etc	29 44
Lumber, hardware, etc	374 51
Mill street bridge	19 65
Nash lane bridge	7 55
Park street bridge	12 25
Point street bridge	1,202 29
Promenade street bridge	24 00
Amount carried forward	$2,215 22

Amount brought forward	$2,215 22	
Red bridge	445 96	
Rent of keeper's house — Washington bridge	36 00	
Salaries — Point street bridge	1,047 75	
Salaries — Red Bridge	534 79	
Salaries — Washington bridge	528 79	
Smith street bridge	265 62	
Sundries	171 66	
Telephone lines	2 68	
Tools	107 82	
Veazie street bridge	74 77	
Wanskuck bridge	108 04	
Washington bridge	1,796 23	
Washington row bridge	255 80	
Weybosset bridge	2 70	
Whelden street bridge	3 94	
	$7,597 77	

Bills deposited with the city treasurer for collection (for old lumber), from July 1, to September 30, 1907, inclusive, amounted to $6 00

During the quarter, coupons from bills collected (for old lumber), have been returned by the city treasurer and receipted for to the amount of $6 50

Bills approved on account of bridges for the fiscal year ending September 30, 1907, inclusive, amounted to $23,900 43

Charged as follows:

Acorn street bridge	$72 27
Atwells avenue bridge	179 59
Barn expenses	432 85
Branch avenue bridge	33 08
Branch avenue culvert	13 96
Building at city yard	17 95
Carfares	50 00
Amount carried forward	$799 61

Amount brought forward	$799 61
Cemetery street bridge	62 96
Charles street railroad bridge	1 80
Crawford street bridge	177 28
Eagle street bridge	4 92
Exchange bridge	68 93
Francis street bridge	3 21
Gaspee street bridge	93 06
Geneva bridge	33 01
Hawkins street bridge	2 63
Horses, wagons, harnesses, etc	316 21
Lumber, hardware, etc	2,619 87
Manton bridge	8 26
Manton avenue bridge	29 45
Merino bridge	58 96
Mill street bridge	63 07
Nash lane bridge	10 99
Park street bridge	14 04
Point street bridge	4,161 95
Post office bridge	89 91
Promenade street bridge	82 19
Randall street bridge	19 35
Red bridge	981 17
Rent of keeper's house—Washington bridge	144 00
Salaries—Point street bridge	4,008 50
Salaries—Red bridge	2,089 29
Salaries—Washington bridge	2,117 04
Smith street bridge	291 48
Smithfield avenue bridge—to rebuild	498 98
Smithfield avenue bridge	22 48
Sundries	968 39
Telephone lines	10 72
Tools	564 42
Valley street bridge—north span	3 18
Valley street bridge—south span	5 15
Veazie street bridge	77 40
Wanskuck bridge	108 04
Washington bridge	2,764 63
Washington row bridge	325 23
Weybosset bridge	189 16
Whelden street bridge	9 51
	$23,900 43

Bills approved for account of rebuilding abutments, piers and superstructure, Point street bridge, from July 1 to September 30, 1907, inclusive, have been paid from the special appropriation for that work to the amount of $11,154 96

Bills approved for account of rebuilding abutments, piers and superstructure, Point street bridge, for the fiscal year ending September 30, 1907, inclusive, amounted to . $76,018 28

PUBLIC LIGHTS.

Bills approved on account of the public lights from July 1 to September 30, 1907, inclusive, amounted to $69,961 89

Charged as follows:

Arc lights	$50,138 69
Incandescent lights	13,407 99
Welsbach lights	6,199 88
Salaries	197 14
Setting and removing gas posts	18 19
	$69,961 89

Bills deposited with the city treasurer for collection from July 1 to September 30, 1907, inclusive, amounted to $15 00

As follows:

Lamp post, lantern and frame	$9 00
Removing gas posts	6 00
	$15 00

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of $15 00

As follows:

Lamp post, lantern and frame	$9 00
Removing gas post	6 00
	$15 00

Bills approved on account of the public lights for the fiscal year ending September 30, 1907, inclusive, amounted to . . $277,253 44

Charged as follows:

Arc lights	$198,934 95
Incandescent lights	53,170 43
Welsbach lights	24,252 73
Salaries	866 14
Setting and removing gas posts	29 19
	$277,253 44

PUBLIC WORKS OFFICE.

Bills approved on account of the public works office from July 1 to September 30, 1907, inclusive, amounted to . . . $5,336 18

Charged as follows:

Salaries of commissioner and secretary	$1,925 00
Salaries of office assistants	3,150 64
Office supplies	240 16
Telephone lines	20 38
	$5,336 18

Bills approved on account of the public works office for the fiscal year ending Sep· 30, 1907, inclusive, amounted to . . $21,844 45

Charged as follows:

Salaries of commissioner and secretary	$7,743 55
Salaries of office assistants	13,221 64
Office supplies	798 60
Telephone lines	80 66
	$21,844 45

ABOLISHING GRADE CROSSING AT GROVE STREET, ETC.

Bills approved for account of abolishing grade crossing at Grove street, etc., for the fiscal year ending September 30, 1907, inclusive, amounted to $6,894 68

Charged as follows:

Building approaches to Arthur avenue bridge.....	$6,659 31
Building retaining walls, etc., Barre street.....	235 37
	$6,894 68

WALTER F. SLADE,
Commissioner.

1908.] CITY DOCUMENT. [No. 4.

ONE HUNDREDTH

QUARTERLY REPORT

OF THE

Department of Public Works

OF THE

CITY OF PROVIDENCE, R. I.

QUARTER ENDING DECEMBER 31, 1907.

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REPORT.

OFFICE OF THE DEPARTMENT OF PUBLIC WORKS,
CITY HALL, PROVIDENCE, R. I., January 2, 1908.

TO THE HONORABLE THE CITY COUNCIL:

In compliance with the requirements of Chapter 41 of the ordinances, the Commissioner of Public Works respectfully presents the one hundredth quarterly report of the expenditures by the several departments under his direction and control, with statements of work ordered and the condition and cost of same, for the quarter ending December 31, 1907.

WATER WORKS.

November 6th, the proposal of the H. B. Smith Machine Company to furnish and deliver in this city one universal bench with boring attachment, one 36-inch band saw, one 26-inch single surface planer and one 16-inch wood turning lathe, for the sum of $777.00 was accepted.

November 11th, the proposal of the Pawtucket Sash and Blind Company to furnish, trim and hang the doors, frames and sashes (minus the hardware), for three filter beds at Pettaconset, for the sum of $891.00, was accepted.

December 6th, the proposal of John W. Lyon to furnish the taps, stops and plugs required during the ensuing year, was accepted and a contract consequently executed. Amount $1,500.95.

The average daily consumption of water during the last quarter was 15,280,178 gallons, and the average daily consumption for the year 1907 was 16,227,179 gallons.

Water pipes were laid during the quarter as follows:

12-INCH.

In Academy avenue; and in Park avenue in the town of Cranston	1,380.32 feet.

8-INCH.

In Hillwood street; in Rolf and Transit streets, Frances and Pontiac avenues in the town of Cranston, and in Homewood avenue in the town of North Providence	2,616.87 feet.

6-INCH.

In Bigelow and McIntire courts; Brewster, Fourth, Maude Moorefield, Nisbet, North Main, Ophelia, Opper, San Souci, Seamans, Tenth and Thornton streets; Carolina, Hillside, Raphael, Summit, Upton, Whitford, and Wyndham avenues; in Bailey, Elsie, George, Highland, Middle and Transit streets, Burnham, Reservoir, Terrace and Washington avenues in the town of Cranston	5,913.56 feet.
Total	9,910.75 feet.

or 1.877 + miles.

Water pipes were removed or abandoned during the quarter as follows:

24-INCH.

At Pettaconset, from old force main	236.92 feet.

6-INCH.

From Benefit, Gano and Neville streets and Academy avenue; and from Frances avenue in the town of Cranston	2,427.41 feet.
Total	2,664.33 feet.

or .504 + miles.

Statement of sizes and lengths of pipe laid since the commencement of the work:

42-inch	25,630.70 feet.
36-inch	10,208.82 feet,
30-inch	61,410.07 feet.
24-inch	46,176.13 feet.
20-inch	9,626.59 feet.
16-inch	44,882.08 feet.
12-inch	116,207.52 feet.
10-inch	15,062.78 feet.
8-inch	314,551.95 feet.
6-inch	1,289,842.96 feet.
Total	1,933,599.60 feet.

or 366.212 + miles.

Water pipes were laid during the quarter for the special water service for fire protection, as follows:

16-INCH.	
In Manton avenue and Olneyville square	1,382.01 feet.
12-INCH.	
In Hartford avenue	500.00 feet.
Total	1,882.01 feet.

or .356 + miles.

Statement of sizes and lengths of pipe laid for the special water service for fire protection since the commencement of the work:

24-inch	4,297.46 feet.
16-inch	34,953.70 feet.
12-inch	5,397.07 feet.
Total	44,648.23 feet.

or 8.456 + miles.

Thirteen fire hydrants were set during the quarter, one in each of the following locations, viz.:

Academy avenue, east side, 365.5 feet north of Whitford.
Albert avenue, Cranston, north side, 273 feet west of Pawtuxet.
Germania avenue, Cranston, northeast corner of Northup.
Germania avenue, Cranston, east side, 2 feet north of Bay View.

Highland street, Cranston, north side, 9.5 feet east of Middle.
Hartford avenue, south side, 3 feet east of Heath street.
Hillside avenue, south side, 441 feet east of gate at North Main street.
Hillwood street, east side, 451 feet north of Eaton.
Laurel avenue, north side, 8.5 feet west of Blackstone boulevard.
Nisbet street, north side, 3 feet west of Patterson.
Park avenue, Cranston, north side, 390 feet east of Stamford.
Upton avenue, north side, 2.5 feet east of Cole.
Whitford avenue, north side, 95 feet west of range of Wyndham.

The total number of fire hydrants, exclusive of those for special service for fire protection, is now two thousand one hundred and forty-six — two thousand and three flush, and one hundred and forty-three post.

Fourteen fire hydrants were set on the special water service for fire protection, one in each of the following locations, viz.:

Broadway, north side, 44 feet east of Bough street.
Hartford avenue, north side, 95 feet west of Plainfield street.
Hartford avenue, north side, 267 feet east of Edna street.
Hartford avenue, north side, 161 feet west of Edna street.
Hartford avenue, north side, 268 feet east of Heath street.
Manton avenue, east side, 35 feet south of Tanyard lane.
Manton avenue, east side, 62 feet north of Delaine street.
Manton avenue, east side, 33 feet north of Chaffee street.
Manton avenue, east side, 39 feet south of Julian street.
Manton avenue, east side, 51 feet north of Florence street.
Manton avenue, east side, 13 feet south of Pope street.
Troy street, west side, 84 feet north of Dike.
Troy street, west side, 28 feet north of Oak.
Westminster street, north side, 14 feet west of range of Stokes.

The total number of fire hydrants on the special water service for fire protection is one hundred and twenty-four.

During the quarter two hundred and sixty-three water meters were set, of which number sixty-four were to replace other meters. The use of seven meters was discontinued.

The following meters were in use at the close of the quarter:

Kind.	Size.									Total.
	½-in.	¾-in.	1-in.	1½-in.	2-in.	3-in.	4-in.	6-in.	8-in.	
Ball & Fitts	1,554	323	72	9	3	.....	.....	.....	.....	1,961
Ball & Fitts, rotary	.....	.....	4	4	.....	1	1	.....	.....	10
Crown	9,942	1,321	391	175	54	33	31	1	.....	11,948
Empire	1,840	213	91	57	15	1	1	.....	.....	2,218
Fales, Jenks & Sons	.....	.....	1	.....	.....	.....	.....	.....	.....	1
Gem	.....	.....	.....	.....	17	35	19	5	.....	76
Hersey	33	.....	.....	.....	.....	.....	.....	.....	.....	33
Nash	521	.....	.....	.....	.....	.....	.....	.....	.....	521
Thomson	5,053	423	74	54	20	7	7	1	.....	5,639
Trident	103	.....	1	.....	.....	.....	.....	.....	.....	104
Venturi	.....	.....	.....	.....	.....	.....	.....	.....	1	1
	19,046	2,280	634	299	109	77	59	7	1	22,512

Two plumber's licenses were issued during the quarter, making the total number one hundred and thirty-three, all of which expire December 31, 1907.

Seven hundred and seven permits to do plumbing were issued during the quarter.

One hundred and fifty-eight applications for water were made during the quarter, making the total number twenty-eight thousand six hundred and seventy-six.

The number of new service stops opened during the quarter was one hundred and eighty-five.

The total number of service stops opened to December 31, 1907, inclusive, was twenty-seven thousand nine hundred and ninety. The number in actual use December 31, 1907, was twenty-five thousand seven hundred and nine.

The following is a list of sprinkler hydrants for car sprinklers, namely:

Angell street, south side, 90 feet east of Wayland avenue, in sidewalk.
Bassett street, northwest side, 105½ feet southwest of Hoppin.
Branch avenue, south side, 316 feet west of Woodward road, in sidewalk.
Camp street, east side, 125 feet north of Olney, in sidewalk.
Chalkstone avenue, northeast corner of Fallon, in sidewalk.
Dexter street, west side, 18 feet south of Cranston, in sidewalk.
Earle street, south side, 71½ feet east of Bucklin.
Eddy street, west side, at Richmond, in street.
Eddy street, east side, 9½ feet south of south line of Calla, in sidewalk.
Edna street, west side, 16 feet north of south line of car house.
Elmwood avenue, east side, 85 feet south of Thackeray street.
Federal street, north side, 19 feet east of Corey, in sidewalk.
Hope street, east side, 125 feet north of Barnes, in street.
Hope street, east side, 64 feet south of Methyl, in street.
Manton avenue, west side, 150 feet south of fire station, in sidewalk.
Market square, north side, 24 feet east of Canal street, in street.
North Main street, west side, 182 feet north of White, in street.
North Main street, west side, 17 feet north of Livingstone, in street.
Orms street, south side, 23 feet east of Windsor, in sidewalk.
Pike street, south side, 105 feet west of Brook, in sidewalk.
Randall square, east side, 32 feet north of Randall street, in street.
Richmond street, southwest side, 44 feet southeast of Pine, in sidewalk.
Silver Spring street, north side, 61 feet east of Charles.
Smith street, southwest side, 360 feet southeast of Hilltop avenue, in sidewalk.
Thurbers avenue, south side, 208 feet east of Broad street, in sidewalk.
Winter street, east side, 187 feet south of Pond, in sidewalk.

The following is a list of drinking troughs supplied with water by the Providence water works, viz.:

Academy avenue, north of Chalkstone.
Allen's avenue, junction of Eddy street.
Angell street, junction of South Angell.
Atwells avenue, junction of Harris.
Basset street, off Hospital.
Branch avenue and Abbott street.
Broad street, junction of Eddy.
Broadway, junction of Westminster street.
Canal street, near Linard.
Charles street, corner of Ormsbee avenue.
Charles street and Branch avenue.
Chalkstone avenue, junction of Manton.
Dexter street, near Durfee.
Dorrance street, near Exchange place.
Douglas and Chalkstone avenues.

Douglas avenue and Admiral street.
Dyer street, near Crawford street bridge.
Dyer street, junction of Eddy.
Elmwood avenue and Public street.
Federal street, junction of Kenyon.
Fountain street, junction of Carpenter.
Hartford avenue, junction of Killingly street.
Manton avenue, junction of Atwells.
Miller avenue (Roger Williams park).
North Main street, junction of Benefit.
Olneyville square.
Plainfield street, junction of Pocasset avenne.
Prairie avenue, junction of Broad street.
Point street, junction of Friendship.
Point street, near the bridge.
Potters avenue, corner of Cranston street.
Randall square.
Reservoir avenue, junction of Pontiac street.
Rochambeau avenue, east of Blackstone boulevard.
Smith street, junction of Chalkstone avenue.
South Main street, junction of Wickenden.
Thayer street junction of Hope.
Trinity square.
Waterman street, corner of East River.
Westminster street, junction of Cranston.
Weybosset street, near Mathewson.
Wickenden street, corner of Governor.

TOWN OF CRANSTON.

Cranston street, junction of Phenix road.
Park avenue, corner of Doric.

TOWN OF JOHNSTON.

Manton avenue, near Killey.

The following table shows the lengths, sizes, etc., of services laid during the year ending December 31, 1907:

Months.	Length of Services in Feet. Size of Pipe. ½ inch.	¾ inch.	1 inch.	1¼ inch.	Totals.	Total Length of Trenching.	Total Length of Paving.	Number and Size of Taps Used. ½ in.	¾ in.	1 in.	1¼ in.	Total.	Number and Size of Stops Used. ½ in.	¾ in.	1 in.	1¼ in.	Total	Service Boxes Set.
January	326.	.....	.....	.....	326.	342.	15.	18	1	....	....	19	20	....	....	....	20	91
February	28.4	.....	.....	.....	28.4	30.	3.	2	....	....	....	2	9	....	....	....	9	9
March	414.2	125.2	8.2	.....	547.6	571.	55.	21	6	2	....	29	99	6	1	....	99	80
April	1,035.4	73.2	45.2	.....	1,153.8	1,214.	120.	63	7	3	....	73	67	6	2	....	75	77
May	982.3	145.	.....	26.2	1,153.5	1,206.5	141.5	58	7	1	1	67	60	6	....	1	67	69
June	638.7	26.2	34.4	.....	699.3	737.5	93.	39	3	3	....	45	44	1	2	....	47	50
July	1,078.2	58.7	36.4	24.7	1,198.	1,200.	130.	63	10	3	3	79	74	7	2	1	84	90
August	1,161.8	49.9	8.2	28.4	1,248.3	1,315.5	117.5	65	4	2	5	76	77	3	1	2	83	89
September	516.5	49.6	17.	.....	583.1	616.	84.5	32	6	2	1	41	36	4	1	....	41	45
October	853.6	54.4	24.6	8.2	940.8	988.	132.	50	3	5	1	59	53	2	3	1	59	66
November	1,031.2	167.2	.....	.....	1,198.4	1,258.	129.	57	14	1	...	72	62	12	....	....	74	77
December	343.4	14.	.....	.....	357.4	377.	16.	14	3	2	....	19	19	....	....	....	19	94
Totals	8,409.7	763.4	174.	87.5	9,434.6	9,921.5	1,045.5	482	64	24	11	581	526	47	12	5	600	636

The following table shows the lengths, sizes, etc., of services laid during thirty-one years ending December 31, 1907.

YEAR.	Length of Services in Feet.									Taps Used.						Stops Used.						Service boxes used.
	Sizes of Pipe.						Totals.	Trenching.	Paving.													
	½ inch.	⅝ inch.	¾ inch.	1 inch.	1¼ inch.	1½ inch				⅜ in.	½ in.	⅝ in.	¾ in.	1 in.	To-tal.	⅜ in.	½ in.	⅝ in.	¾ in.	1 in.	To-tal.	
To Dec. 31, 1906.....	9,919.9	265,720.28	24,223.69	5,327.2	4,128.1	457.7	309,776.87	325,809.29	39,531.28	612	15,970	1,834	466	377	19,259	645	16,999	1,528	329	318	19,819	20,370
1907.....	.....	8,409.70	763.40	174.	87.5	.....	9,434.60	9,921.50	1,045.50	....	482	64	24	11	581	....	536	47	12	5	600	636
Totals...	9,919.9	274,129.98	24,987.09	5,501.2	4,215.6	457.7	319,211.47	335,730.79	40,576.78	612	16,452	1,898	490	388	19,840	645	17,535	1,575	341	323	20,419	21,006

Changes in size and location of services in 1907:

Taps and Stops.										Sizes and Lengths of Lead Pipe.											Trenching.	Paving.	Change in size only.	Change in location only.	Change in both size and location.	Relaid.
Taken Out.						Inserted.																				
3/8 inch.	1/2 inch.	3/4 inch.	7/8 inch.	1 inch.	3/8 inch.	1/2 inch.	3/4 inch.	7/8 inch.	1 inch.	1/2 inch.	3/4 inch.	7/8 inch.	1 inch	1 1/4 inch.	1 1/2 inch.	3/8 inch.	3/4 inch.	1 inch.	1 1/4 inch.	1 1/2 inch.						
47	71	5	11	14		46	8	9	6	774.7	1154.7	96.	202.3	254.8		736.9	111.3	142.1	113.6		2,820 5	1,059.	52	8	6	3

82 services have been removed.
During the year 195 taps were dug up and examined.
192 were cleaned and 3 were found unobstructed.
34 private taps were inserted.

The following table exhibits the number of service stops opened each month from the commencement to December 31, 1907:

Months.	1871	1872	1873	1874	1875	1876	1877	1878	1879	1880	1881	1882	1883	1884	1885	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907
January...	....	54	33	21	34	55	15	49	9	20	7	17	15	21	17	18	26	7	39	36	39	56	40	29	30	27	30	40	18	24	18	27	26	19	24	26	28
February..	....	47	18	18	7	25	23	18	9	19	3	11	9	10	7	15	7	10	21	25	26	23	24	28	8	28	24	21	7	15	10	18	26	12	11	26	16
March.....	....	38	34	63	7	45	32	60	19	46	23	39	11	28	9	24	16	14	19	28	24	28	36	40	27	20	42	46	28	30	24	39	35	12	20	40	22
April.....	....	109	109	108	32	108	82	78	52	58	55	49	55	62	48	68	60	38	61	53	73	76	71	76	67	100	70	53	69	47	73	73	60	58	60	57	50
May	...	224	206	147	162	168	136	95	80	84	66	72	78	62	62	61	70	52	74	66	114	83	91	81	79	98	82	51	73	60	67	52	70	76	80	71	78
June.....	....	329	295	151	172	148	114	103	71	109	82	48	64	81	81	59	50	86	59	80	83	103	106	105	100	76	86	61	73	60	96	71	58	67	75	68	72
July.....	....	333	261	127	141	158	83	80	49	75	56	77	66	76	77	83	62	89	74	67	85	105	93	80	89	83	59	51	66	44	81	74	59	80	73	45	73
August....	....	224	209	123	83	94	91	51	51	39	58	87	69	61	57	71	49	52	56	76	95	104	115	116	83	64	69	54	80	66	78	62	57	52	75	65	83
September	..	184	147	139	101	94	80	63	44	37	60	67	93	50	70	59	74	63	64	77	93	114	88	112	70	71	67	53	53	76	72	56	72	61	56	71	51
October ...	....	138	135	160	92	84	81	78	79	48	61	56	47	65	62	52	80	70	64	54	104	102	96	85	90	70	62	47	54	65	66	43	58	66	64	77	74
November.	....	100	104	185	86	54	73	57	63	54	37	64	49	51	39	57	69	47	58	72	81	118	80	70	68	52	54	42	45	54	63	55	48	58	60	66	70
December.	56	83	45	122	60	35	55	45	47	29	40	27	56	44	46	28	49	42	53	50	83	102	62	62	57	58	53	47	40	56	44	46	43	51	48	40	41
Totals ...	56	1863	1596	1364	977	1068	868	777	573	618	548	614	612	611	575	595	612	570	642	684	900	1014	902	884	768	747	698	566	606	597	692	616	612	612	646	652	658

The receipts for water each year since the commencement have been as follows:

Year.	Amount.	Year.	Amount.
1872	$41,003 51	1890	$401,140 86
1873	97,386 09	1891	404,553 84
1874	132,052 39	1892	409,421 21
1875	165,144 71	1893	427,546 51
1876	183,868 73	1894	432,383 97
1877	200,039 39	1895	471,069 97
1878	218,883 33	1896	485,187 33
1879	229,551 78	1897	490,652 47
1880	247,705 06	1898	502,603 10
1881	260,530 87	1899	522,124 46
1882	269,318 77	1900	554,949 62
1883	283,632 89	1901	578,869 07
1884	302,368 36	1902	605,307 35
1885	313,561 21	1903	621,016 74
1886	323,084 67	1904	670,700 90
1887	339,513 60	1905	673,252 97
1888	346,731 58	1906	691,459 12
1889	377,497 97	1907	741,487 03

The amount of bills approved on account of water works from October 1, to December 31, 1907, inclusive, was:

For maintenance, ... $101,189 57

Classified as follows:

PETTACONSET PUMPING STATION.

Coal and wood	$5,859 19
Firemen	892 92
Sundries	715 18
Engineers	581 28
Superintendence	437 14
Amount carried forward	$8,485 71

Amount brought forward	$8,485 71	
Repairs on boilers	200 41	
Oil, waste and packing	162 02	
Allis-Chalmers high-duty engine	122 36	
Care of grounds	101 01	
Barn expenses	90 42	
Labor on fuel	68 04	
Lights	47 74	
Horses, wagons, harnesses, etc.	38 55	
Corliss pumping engine and house	37 80	
Cornish engine-house	25 25	
Worthington high-duty engine	22 68	
		$9,401 99
Sand Filtration Plant.		
Installation	$30,921 30	
Cleaning beds	2,894 22	
Labor and supplies, pumping	1,967 16	
Laboratory — labor and supplies	444 58	
Miscellaneous supplies	406 13	
		36,633 39
Sockanosset Reservoir.		
Watchman	$180 00	
Sundries	16 38	
		196 38
Hope Pumping Station.		
Firemen	472 24	
Engineers	349 71	
Sundries	63 32	
Lights	54 11	
Repairs on boilers	20 40	
Holly pumping engine	1 30	
Oil, waste and packing	60	
		961 68
Hope Reservoir.		
Sundries	$2,004 07	
Watchman	202 50	
		2,206 57
Fruit Hill Reservoir.		
Sundries	$503 28	
Watchman	180 00	
		683 28
Meter Department.		
Setting and repairing meters	$2,480 03	
Water meters	1,159 95	
		3,639 98
Amount carried forward		$53,723 27

Amount brought forward		$53,723 27

PIPE LINE AND SERVICE STOPS.

Repairs	$4,149 21	
Inspection of pipe line and services	2,595 08	
Salaries of assistant engineers	1,775 33	
Superintendence — salaries	902 70	
		9,422 32

PIPE YARD.

Fire hydrants, boxes and covers	$8,742 10	
Laying water pipe	5,146 72	
Special water service for fire protection	3,489 55	
Laying service pipe	1,861 39	
Tools	1,640 92	
Special castings	1,541 44	
Service pipe	717 48	
Pig lead and tin	352 56	
Labor on and carting pipe	278 20	
Leading main from Sockanosset to city — to lay	223 15	
Taps and stops	216 73	
Pipe yard, office expenses	98 79	
Repairs on pipe yard buildings	75 65	
Leak in Washington street main	10 00	
		24,394 68

MISCELLANEOUS.

Town of Cranston tax	$9,616 62	
Salaries of clerks and inspectors	1,746 63	
Barn expenses	942 32	
Town of North Providence tax	400 00	
Prevention of defilement of the Pawtuxet	300 00	
Sundries	189 81	
Horses, wagons, harnesses, etc	173 99	
Telephone lines	153 93	
Car fares	125 00	
Inspection of water pipe with reference to electrolysis	1 00	
		13,649 30
		$101,189 57

The total expenditures to December 31, 1907, inclusive, was $11,324,459 44

The *net* expenditure for maintenance from October 1 to December 31, 1907, inclusive was	$91,779 50
The *net* expenditure for maintenance to December 31, 1907, inclusive, was	$3,529,580 57

The value of the water works system January 1, 1907, as estimated by the city engineer, was as follows:

Pettaconset pumping station	$340,694 00	
Hope pumping station	117,903 11	
Sockanosset, Hope and Fruit Hill reservoirs	683,982 39	
Main lines and distribution pipes	2,828,178 21	
Real estate in Pawtuxet and Lincoln	15,975 00	
Tools and supplies	53,629 26	
		$4,040,361 97

Bills deposited with the city treasurer for collection from October 1, to December 31, 1907, inclusive, amounted to . . . $100,503 71

As follows:

Water	$90,113 46	
Water meters	4,851 50	
Labor and material, laying services, etc	2,407 65	
Setting and repairing meters	2,380 28	
The Rhode Island Company for one-half of expense of electrolysis investigation	418 92	
Repairs on pipe line	129 20	
Rent of real estate	110 90	
Penalties	52 00	
Empty oil barrels	19 80	
Permanently closing service stops	15 00	
Use of derrick	5 00	
		$100,503 71

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of $107,138 60

As follows:

Water	$97,676 53	
Water meters	4,738 75	
Labor and material, laying services, etc	2,570 85	
Setting and repairing meters	1,886 77	
Rent of real estate	113 00	
Repairs on pipe line	60 90	
Penalties	52 00	
Empty oil barrels	19 80	
Permanently closing service stops	15 00	
Use of derrick	5 00	
		$107,138 60

SEWERS.

Three drain layer's licenses were issued during the quarter, making the total number one hundred and forty-four, all of which expire December 31, 1907.

During the quarter, two hundred and ninety-five permits were issued to drain layers — one hundred and thirty-three for new work and one hundred and sixty-two for extensions and repairs of drains.

November 7th, the proposals of Starkweather and Williams Company and Charles S. Bush Company, to furnish and deliver at Harbor Junction wharf the prime green copperas in bulk required during 1908, at 65 cents per one hundred pounds, were each accepted for one-half the quantity required, respectively.

November 22d, contracts for the construction of sewers were awarded and subsequently executed, as follows:

[The amounts given below are what are estimated will be paid the contractors for labor, and do not include the cost of inspection and materials.]

To Frederick E. Shaw.

No. of resolution.	Date of approval.		
256.	July 2, 1907,	*Academy avenue, from Smith street to Whitford avenue,*	$4,145 60
419.	Nov. 9, "	*Academy avenue, from a point about 90 feet north of Chalkstone to Molloy street,*	479 80
422.	" " "	*Clarence street, from a point about 100 feet east of Webster avenue to Priscilla,*	378 30

No. of resolution.	Date of approval.		
423.	Nov. 9, 1907,	*Fairmount avenue, from Mount Pleasant to Leah street, and in Leah street, from Fairmount avenue to Atwells,* . . .	$1,467 10
424.	" " "	*Langdon street, from Hogan to Branch avenue,*	1,525 19
425.	" " "	*Corliss street, from Cross to West River,* . .	783 10

To Charles Crankshaw.

420.	Nov. 9, 1907,	*Blackstone boulevard, east side, from the north line of Margrave avenue to present end of sewer about 100 feet north of President avenue, and on the west side of Blackstone boulevard from Glen avenue to a point 50 feet north of Upton avenue,* .	567 83
421.	" " "	*Dodge street, from the northerly line of Bridgham street school estate to Westminster street,* .	489 50

December 16th, the proposal of the Warner-Miller Company to furnish and deliver in the city yard the sewer pipe and flagstones required during the season of 1908, was accepted and a contract subsequently executed. Amount, $4,323.91.

The proposal of the J. S. Packard Dredging Company for dredging in the harbor nearly opposite the sewage precipitation tanks at 36 9-10 cents per cubic yard, was accepted and a contract subsequently executed.

December 17th, the following proposals for furnishing sewer material were accepted, viz.:

Nelson A. Bennett, 25 catch-basin inlet stones at $4.75 each.
John Capaldi & Company, 75 catch-basin inlet stones at $5.00 each.

SEWERS CONSTRUCTED TO DECEMBER 31, 1907, IN MILES.

ITEMS.	KIND.	Built previous to 1907.	Built during 1907.	Total to Dec. 31, 1907.
Under regular appropriation	Brick.	40,961	1,002	41,963
Under regular appropriation	Pipe.	136,541	2,195	138,736
Under improved sewerage appropriation	Brick and pipe.	28,388	.....	28,388
Total miles of sewers		205,890	3,197	209,087

During the year, 82 catch-basins, 57 extra inlets, and 153 manholes have been built, making a total in use December 31, 1907, of 4,943 catch-basins 1,781 extra inlets, and 9,044 manholes.

During the quarter, the construction of the following sewers was completed, namely:

No. of resolution.	Date of approval.		Date of completion.
288.	Sept. 12, 1905,	*West River street, from Cross to Burke, and from West River street at Elk easterly through right of way about 530 feet to end of Section 22 of the improved sewerage system.*	Oct. 10, 1907.

No. of resolution.	Date of approval.		
125.	April 2, 1907,	*Sterling avenue, from Laurel Hill to Webster, Terrace avenue, from Sterling to a point about 100 feet south of Dora street, and in Magnolia street, from near Webster avenue to Bancroft street.*	Oct. 23, 1907.
253.	July 2, "	*Laurel avenue, from Lorraine street to Blackstone boulevard.* . .	Oct. 3, 1907,
255.	" " "	*Hillside avenue, from summit in Hillside to North Main street.* .	Oct. 21, 1907.

Work upon the following sewers was in progress at the close of the quarter, namely:

No. of resolution.	Date of approval.	
124.	April 2, 1907,	*Academy avenue, from Justice street to Whitford avenue, and in Molloy street and Academy avenue, from Rowan street to Justice.*
213.	June 7, "	*Eaton street, from summit at Roslyn to Douglas avenue.*
256.	July 2, "	*Academy avenue, from Smith street to Whitford avenue.*
420.	Nov. 9 "	*Blackstone boulevard, east side, from the north line of Margrave avenue to present end of sewer about 100 feet north of President avenue, and on west side from Glen avenue to a point 50 feet north of Upton avenue.*

Work upon the following sewers, completing the work ordered by the city council, had not commenced December 31, 1907, namely:

No. of resolution.	Date of approval.	
211.	June 7, 1907,	*Alverson avenue, from present end to Plainfield street.*
214.	" " "	*Elmhurst avenue and Smith street, from near Eaton to present end of sewer in Smith.*
215.	" " "	*Lowell avenue, from Plainfield street to Hartford avenue.*
254.	July 2, "	*Elmgrove avenue, from Sessions street to Savoy, and in Savoy, from Elmgrove avenue to Morris.*
419.	Nov. 9, "	*Academy avenue, from a point 90 feet north of Chalkstone to Molloy street.*
421.	" " "	*Dodge street from the northerly line of Bridgham street school estate to Westminster street.*
422.	" " "	*Clarence street, from a point about 100 feet east of Webster avenue to Priscilla.*
423.	" " "	*Fairmount avenue from Mt. Pleasant to Leah street and in Leah street, from Fairmount avenue to Atwells.*
424.	" " "	*Langdon street, from Hagan to Branch avenue.*
425.	" " "	*Corliss street from Cross to West River.*

for the year 1907.

Months.	Old Work.								New Work.									Total amount deposit removed, cubic yards.
	Old Drains.			Sand-Catchers.		Open Ditches.			Sumps.		Sewers.				Catch-Basins.			
	Number.	Length in feet.	Deposit removed, cu. yards.	Number.	Deposit removed, cu. yards.	Number.	Length in feet.	Depost removed cu. yards.	Number.	Deposit removed cu. yards.	Number.	Length in feet.	Deposit removed. cu. yards.	Dead Ends.	No. times examined.	Number cleaned.	Deposit removed, cu. yards.	
January	....	.....	.....	....	.....	....	.....	.....	12	274.63	184	39,000	102.63	.....	1	286	589.07	966.33
February	....	.....	.....	....	.....	...	.....	.....	1	35.18	10	2,000	17.78	.....	.....	.....	.....	52.96
March	....	.....	.....	....	.....	....	.....	.....	25	290.48	118	32,400	43.45	75	1	204	412.52	746.45
April	....	.....	.....	11	54.00	....	.....	.....	6	74.74	12	6,000	53.16	253	1	718	1,617.00	1,798.90
May	....	.....	.....	....	.....	....	.....	.....	24	269.00	198	47,200	100.08	65	2	740	1,511.96	1,881.04
June	....	.....	.....	....	.....	....	.....	.....	22	300.30	289	55,800	109.74	.....	2	881	1,721.93	2,131.97
July	...	.....	.....	....	.....	....	.....	.....	13	300.00	11	2,000	23.18	.....	1	814	1,434.82	1,758.00
August	2	300	18.00	....	.....	3	637	124.70	20	240.48	32	4,300	34.38	.....	1	1,140	1,696.00	2,113.56
September	....	.....	.....	....	.....	1	375	36.11	12	207.15	12	2,400	22.52	.....	1	469	1,270.74	1,536.52
October	2	375	26.17	....	.....	...	.....	.....	13	260.63	93	16,000	49.00	.....	1	736	1,709.56	2,045.36
November	....	.....	.....	....	.....	1	375	13.88	28	369.10	69	10,600	54.21	.....	1	711	1,841.55	2,278.74
December	1	175	10.18	....	.....	....	.....	.....	13	276.15	17	600	67.85	.....	1	578	1,469.82	1,824.00
Totals	5	850	54.35	11	54.00	5	1,387	174.69	189	2,897.84	1045	218,300	677.98	383	13	7,277	15,274.97	19,133.83

In addition to the accompanying form, the following work has been performed by the sewer maintenance department for the year 1907:

Work on Sewers.

Examined all sewers for condition and deposit, and gates, slots, and sumps forty-nine times. Replaced seven gates in sewers, sixty-two manhole frames, seventy-one manhole covers; also reset 264 manhole frames.

Removed snow from seven sidewalks. Repaired three sewers, seven manholes, six house connections, forty-eight holes over sewers, three sumps, two derricks, twelve sewer gates and three gate houses. Altered three gate manholes; built three chutes; removed boilers from pumping station on Ernest street; connected sewer in Prairie avenue with sewer in Dudley street; lowered six house connection traps in Arthur avenue; built steps at pumping station on Ernest street; put in fifteen branches, flushed four house connections to curb and thawed out 300 chutes.

Work on Basins.

Examined all basins for concrete and repairs. Flushed 2,997 chutes and 4,878 traps in basins and removed snow from 24,687 inlets. Thawed out 165 chutes; reset 112 traps in basins and altered six basins; replaced thirty-six covers and twelve traps. Repaired forty-three gates, twenty-one chutes, sixty-one holes at basins and thirty-four basins.

Old Work.

Built two drains, leveled twenty-five dumps, filled one fire well, covered up deposit four times at pumping station on Ernest street and repaired nine old drains, six old ditches, two derricks, six bulkheads and six culverts.

Miscellaneous Work.

Cleaned 128 connections, charged $358.78; pumped out boilers at Tyler school on Plain street, $325; pumped out ten cellars, $57.43; built and altered basins and reset manhole frames for the Providence Telephone Company, $91.52; built basins and chutes, altered drains, manholes and chutes and repaired sewer for N. Y. N. H. & H. R. R. Company, $278.36; supplied water for Horton & Hemenway, $7.71; puddled ditch for Providence Gas Company, $307.40; altered manholes and chutes, built basins, flushed track grates and switches and supplied water for the Rhode Island Company, $2,424.60; supplied water for Warren Brothers, $139.65; built basin for fire department, $138.97; dug test wells on Eaton street for new hospital, $93.30; cleaned boiler tubes for Rogers Screw Company, $5.92; built chute for William Gilbane & Brother, $7.65; put in 12-inch x 6-inch branch on Summer street, $22.69; cleaned sewer on Mount Pleasant avenue for F. E. Shaw, $57; filled one cistern, $2.

Water Maintenance Department: Supplied water on Eaton street; removed ashes from Hope Station eight times; furnished fireman at Hope Station; set up ice plant and removed ice from filtration tanks; altered

and repaired basin connections on Manton, Laurel and Hartford avenues and Dyke street; built manholes on new pipe line; painted and repaired fence at Hope Reservoir; altered manholes on Olney street; altered and repaired connections Harris and Brayton avenues and Eagle street; connected two sprinklers; connected drinking fountain on Eddy street and flushed five others; repaired fence on Reservoir avenue; pumped out cellars and repaired manholes on Washington street; pounded and seeded banks at Hope and Sockanosset reservoirs and carted ashes from cars to Hope, Sockanosset and Fruit Hill reservoirs; repaired boiler house and coal bin at Hope station.

Highway Department: Altered manholes and basins on Eddy, Silver Spring, Friendship and Broad streets; built three basins and three chutes and abandoned four basins on Silver Spring street.

Sewer Construction Department: built twenty-nine basins, forty-one chutes and one manhole; abandoned two basins, examined five new sewers and moved inspectors houses.

Bridge Department: Rebuilt five basins and set one track grate on Point street for approaches to bridge.

The amount of bills approved on account of sewers from October 1 to December 31, 1907, inclusive, was:

For construction, ... $36,316 41

Charged as follows:

Material	$2,590 61
Additional catch-basins	833 89
Sundries	621 29
Contract reservations	526 00
Testing cement	283 93
Tools	44 37
Building wharf for residue disposal at sewage precipitation tanks	9 69
Sewer in Academy avenue and Molloy street	13,975 20
Sewer in Academy avenue, from Smith street to Whitford avenue	712 68
Sewer in Anthony avenue, from Avon street to Cranston	4 08
Sewer in Berkley street, from near Harold to River avenue	100 57
Sewer in Blackstone boulevard, east and west side	328 00
Sewer in Eaton street, from summit at Roslyn to Douglas avenue	4,649 14
Sewer in Elmgrove avenue and Savoy street	3,045 28
Sewer in Hillside avenue, from summit in Hillside to North Main street	2,856 96
Amount carried forward	$30,581 69

Amount brought forward	$30,581 69
Sewer in Laurel avenue, from Lorraine street to Blackstone boulevard	993 75
Sewer in Montague and Greenwood streets	5 10
Sewer in Plainfield street, from near Lowell avenue to Laurel Hill	4 81
Sewer in Progress avenue, from Webster to Whitehall street	4 82
Sewer in Sterling and Terrace avenues and Magnolia street	2,318 02
Sewer in Tell street, from near Vinton to Courtland	9 18
Sewer in West River street and in right of way	2,399 04
	$36,316 41

For maintenance, ... $33,607 50

Classified as follows:

Cleaning basins and sewers	$7,375 80
Repairing basins and sewers	3,866 08
Sundries	2,516 64
Cleaning and repairing old drains	1,180 75
Inspection of connections	696 92
Tools	566 31
Barn expenses	538 25
Salary, superintendent	437 14
Horses, wagons, harnesses, etc	397 48
Use of water	300 00
Office expenses	116 96
Cleaning private connections	51 92
Telephone lines	41 18
Car fares	10 00
Repairs on buildings, sewer maintenance yard	9 44
Repairs on gate houses	6 76

ERNEST STREET STATION.

Coal and wood	2,356 79
Engineers	842 19
Firemen	699 90
Repairs on boilers	652 30
Cleaning screens	641 96
Cleaning and repairing pumps	486 00
Care of grounds	154 53
Supplies	106 37
Repairs on engines	51 66
Care of buildings	39 39
Lights	22 12
Repairs on buildings	11 22
Amount carried forward	$24,178 06

SEWAGE PRECIPITATION TANKS.

Amount brought forward	$24,178 06
Chemicals	3,880 88
Labor in sludge disposal	2,711 36
Labor on sewage precipitation	1,319 12
Electrical power	512 50
Repairs on buildings	381 11
Experimental treatment of sludge	273 52
Miscellaneous supplies	223 51
Fuel	95 28
Lights	22 23
Repairs on machinery	9 93
	$33,607 50

The *net* expenditure for construction of sewers to December 31, 1907, inclusive, was $8,017,508 73

The *net* expenditure for maintenance of sewers to December 31, 1907, inclusive, was $1,519,444 30

Bills deposited with the city treasurer for collection from October 1 to December 31, 1907, inclusive, amounted to . . $5,440 68

As follows:

Miscellaneous work	$3,150 60
Cleaning private connections	90 00
Pumping out cellars	22 41
Second-hand manhole frames and covers	14 00
Empty oil barrels	11 40
Sewer material	2,043 84
Building basins for the Rhode Island Company	108 43
	$5,440 68

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of $5,665 21

As follows:

Miscellaneous work	$3,491 31
Cleaning private connections	82 25
Pumping out cellars	22 41
Second-hand manhole frames and covers	14 00
Empty oil barrels	11 40
Sewer material	2,043 84
	$5,665 21

HIGHWAYS.

One permit to open streets was issued during the quarter.

December 4th, the proposal of the Citizens Concrete Company to lay concrete sidewalks was accepted as follows, viz.: For new work, 39 cents per square yard; for top-dressing, 24 cents per square yard.

Eight hundred and fourteen notices to build or repair sidewalks were served on the abutting owners during the year 1907. The work, including one hundred and twelve brought over from the preceding year, was done as follows:

By the abutting owners	705
By the city, at the expense of the abutting owners	91
Extension of time granted to	38
Work not done	92

The length of received streets December 31, 1907, was about 237.67 miles, measured on street lines and to street line intersection. But, as it is customary in street construction or street paving to complete the work to the curb line intersection, the lengths in the following tables are measured on those lines and sub-divided as follows:

Received streets	244.10 miles.
Streets curbed and built with macadam	168.91 miles.
Streets not curbed, but the roadway macadamized or graveled	28.45 miles.
Streets curbed and paved	36.30 miles.
Streets received, but not improved	10.44 miles.
Total	244.10 miles.

The actual area of street pavement is 794,520 square yards. If this is estimated to an average width of roadway of 30 feet, it would be equal to 45.14 lineal miles, and is sub-divided as follows:

Granite blocks	33.01 miles.
Cobble	5.01 miles.
Asphalt	5.10 miles.
Bitulithic	1.20 miles.
Vulcanite	.40 miles.
Brick	.42 miles.

In addition to the general patching necessary to maintain the streets in good repair, the following work has been done during the year ending December 31, 1907, namely:

New streets built of macadam	13,482.00	linear feet.
Streets paved with new material	11,132.50	linear feet.
Curbing set	23,921.50	linear feet.
Streets rebuilt	9,400.00	linear feet.
Streets resurfaced	139,800.00	linear feet.
Streets graded	7,511.00	linear feet.
Asphalt pavement laid	366.10	square yards.
Bitulithic pavement laid	21,189.40	square yards.
Block pavement laid	15,214.60	yards.
Cobble pavement laid	171.00	square yards.
Asphalt pavement relaid	4,419.60	square yards.
Block paving relaid	9,151.90	square yards.
Brick paving relaid	101.20	square yards.
Cobble paving relaid	1,106.10	square yards.
Concrete sidewalks laid	5,443.20	square yards.
Concrete sidewalks patched and top-dressed	4,207.65	square yards.
Crushed stone used	39,498.60	tons.
Screened gravel used	5,580.00	cubic yards.

Of the above amount of pavement laid and relaid, the cost of laying and relaying 22,274.30 square yards, amounting to $35,437.89 was paid by the corporations for which the work was done.

The following named streets, aggregating 34.6 miles, have been resurfaced during the year:

Academy avenue, from Chalkstone to Atwells.
Allens avenue, from Henderson street to Public.
America street, from Broadway to Federal street.
Andem street, from Canton to Academy avenue.
Angell street, from Benefit to Thayer.
Arnold street, from Hope to Governor.
Arthur avenue, from Cedar street to West Exchange.
Atwells avenue, from Aborn street to Bradford.

The following named streets, aggregating 26.47 miles, hav been resurfaced during the year:

Abbot street, from North Main to Camp.
Acorn street, from Atwells avenue to Spruce street.
Adelphi avenue, from Taber to Wayland.
Admiral street, from Charles to Chad Brown.
Amherst street, from Putnam to Manton avenue.
Angell street, from Patterson to Butler avenue.
Arch street, from Elmwood avenue to Gilmore street.
Armstrong avenue, from Brook street to East.
Arthur avenue, from Atwells to Cedar street.
Barclay street, from Federal to Atwells avenue.
Barrows street, from Plainfield to Pocasset avenue.
Beacon avenue, from Friendship street to Pine.
Black street, from Orms to Chalkstone avenue.
Blackstone street, from Plain to Friendship.
Blackstone boulevard, from Mount avenue to Laurel.
Bough street, from Dike to Westminster.
Bowdoin street, from Appleton to Amherst.
Bowen street, from Congdon to Brown.
Branch avenue, from Dryden lane to Smithfield avenue.
Branch avenue, from Charles street to Hawkins.
Broad street, from Parkis avenue to Public street.
Brook street, from Power to Meeting.
Brown street, from Power to George.
Bucklin street, from Potter avenue to Burnett street.
Burgess street, from Westminster to Cranston.
Carpenter street, from Vinton to Marshall.
Carter street, from Bucklin to Elmwood avenue.
Central street, from Pearl to Bridgham.
Chalkstone avenue, from Academy to Unit street.
Chalkstone avenue, from Smith street to Felix.
Chalkstone avenue, from Ashburton street to railroad bridge.
Clifford street, from Chestnut to Plain.
College street, from South Main to Benefit.
Commodore street, from Silver Spring to Branch avenue.
Congdon street, from Angell to Jenckes.
Congress avenue, from Melrose street to Elmwood avenue.
Courtland street, from Westminster to Broadway.
Cross street, from West River to Corliss.
Cushing street, from Congdon to Prospect.
Cypress street, from Knowles to Camp.
Daniel avenue, from Plainfield street to Bend.
Darling street, from West River to Corliss.
Dart street, from West River to Corliss.
De Soto street, from Grove to the Woonasquatucket river.
Dexter street, from Daboll to Cranston.
Douglas avenue, from Veazie street to Veazie.
Douglas avenue, from O'Neil street to Branch avenue.
Dudley street, from Gay to Prairie avenue.

East River street, from Angell to Waterman.
Elm street, from Eddy to Plain.
Federal street, from Bradford to Arthur avenue.
Gano street, from Wickenden to Angell.
George street, from Benefit to Brown.
Gifford street, from Plainfield to Whittier avenue
Governor street, from Wickenden to Pitman.
Greeley street, from Charles to Hassan.
Halsey street, from Prospect to Brown.
Harlam street, from Laurel Hill avenue to Barrows street.
Harris avenue, from Atwells to Helme street.
Heath street, from Plainfield to Laban.
Helme street, from Valley to Harris avenue.
Hospital street, from Eddy to Lockwood.
James street, from South Main to Benefit.
Jewell street, from Plainfield to Killingly.
Judith street, from Lena to near Sterling avenue.
Junction street, from Arch to Bridgham.
Knight street, from Westminster to Atwells avenue.
Knowles street, from Pleasant to Cypress.
Landor street, from Pearl to Lockwood.
La Vaughn street, from Amherst to Atwells avenue.
Lena street, from Judith to Latham.
Lester street, from Harrison to Pearl.
Lippitt street, from North Main to Camp.
Lloyd avenue, from Prospect to Brown.
Livingston street, from North Main to Nichols.
Lockwood street, from Friendship to Broad.
Lockwood street, from Hospital to Plain.
Magnolia street, from Bancroft to Pocasset avenue.
McDonough street, from Marvin to Huntington avenue.
Messer street, from Cranston to Westminster.
Moore street, from Updike to Elmwood avenue.
Newton street, from Federal to Atwells avenue.
Nichols street, from Charles to Pettis.
Northup avenue, from Silver Spring street to Edward.
Olney street, from Brown to Hope.
Parkis avenue, from Elmwood to Broad street.
Pearl street, from Broad to Cranston.
Pequot street, from Federal to Atwells avenue.
Pettis street, from Nichols to Shove.
Plain street, from Lockwood to Public.
Pitman street, from Wayland avenue to Governor street.
Pond street, from Spring to Stewart.
Pope street, from Amherst to Manton avenue.
Potter avenue, from Cranston street to Dexter.
Power street, from Governor to Gano.
Prairie avenue, from Lockwood street to Willard avenue.
Printery street, from Randall to Livingstone.
Promenade street, from Calverly to Gaspee.
Public street, from Plain to Ocean.

Ralph street, from Plainfield to Laban.
Regent avenue, from Harold street to Canton.
Reservoir avenue, from Elmwood to railroad bridge.
River avenue, from Admiral street to Douglas avenue.
Rochambeau avenue, from Blackstone boulevard easterly.
Rutland street, from Elmwood avenue to Bucklin street.
Sexton street, from Abbott to North Main.
Silver Lake avenue, from Union to Plainfield street.
Silver Spring street, from Charles to Branch avenue.
Silver Spring street, from Northup avenue to Ledge street.
Smithfield avenue, from Ledge street to city line.
South street, from Eddy to Plain.
South Angell street, from Butler avenue to East River street.
Spring street, from Broad to Westminster.
Spruce street, from Acorn to Brayton avenue.
Steere avenue, from Manton to Amherst street.
Summer street, from Pond to Westminster,
Sutton street, from Broadway to Atwells avenue.
Swiss street, from Knight to Ridge.
Transit street, from Governor to East.
Traverse street, from Wickenden to Sheldon.
Trenton street, from Governor to Gano.
Troy street, from Westminster to Dike.
Union avenue, from Laurel Hill to Pocasset.
Valley street, from Helme to Broadway.
Veazie street, from Branch avenue to Woodward road.
Veazie street, from Douglas avenue to Douglas.
Virginia avenue, from Ohio to California.
Wadsworth street, from Salem to Brattle.
Waldo street, from Salem to Brattle.
Washington street, from Jackson to Franklin.
Waterman street, from Cooke to Wayland avenue.
Waterman street, from North Main to Prospect.
Wayland avenue, from Waterman street to Angell.
Webster avenue, from Pocasset to Cranston street.
Weeden street, from Federal to Atwells avenue.
Western street, from Pleasant to Jenkins.
West Exchange street, from Aborn to Brayton avenue.
Westfield street, from Elmwood avenue to Dexter street.
West Friendship street, from Elmwood avenue to Broad street.
Wickenden street, from East to Gano.
Willard avenue, from Gay street to Prairie avenue.
Woodward road, from Veazie street to city line.

1.78 ¼ miles of streets were rebuilt during the year, namely:

Angell street, from Prospect to Wayland avenue.
Eddy street, from Crary to Point.
Point street, from Eddy to Point street bridge.
Sabin street, from Aborn to Broadway.
Waterman street, from Prospect to Cooke.

2.215 + miles of streets have been graded during the year, namely:

Anthony avenue, from Cranston street to its westerly termination.
Berkley street, from Harold to River avenue.
Chatham street, from Silver Spring to Denison.
Kelley street, from Bancroft to Magnolia.
Montague street, from Boylston to Morris avenue.
Mount Pleasant avenue, from Atwells to Dover street.
Silver Lake avenue, from Union to Farmington.
Sterling avenue, from Webster to Laurel Hill.
Tell street, from Vinton to Courtland.
Terrace avenue, from Laurel Hill to Union.
Union avenue, from Pocasset to Silver Lake.
Veazie street, from Douglas avenue to Douglas.

During the quarter the following work was completed:

SIDEWALKS CURBED AND GUTTERS PAVED.

Date of order.			
May	16,	1907,	*Tell street, from Vinton to Courtland.*
Sept.	19,	"	*Berkley street, from River avenue to Harold street.*
August	1,	"	*Terrace avenue, from Laurel Hill to the the city line.*
Sept.	19,	"	*Hamilton street, from Adelaide avenue to Lenox.*
Oct.	17,	1907,	*Sterling avenue, from Laurel Hill to Webster.*
"	"	"	*Pemberton street, from Dover to Beaufort.*

REBUILD WITH WARREN BROTHERS BITULITHIC PAVEMENT.

Date of order.			
May	17,	1907,	*Angell street, from Prospect to Wayland avenue.*
July	2,	1907,	*Waterman street, from Prospect to Cooke.*

The following work, ordered by the board of aldermen and city council, had not commenced December 31, 1907, namely:

SIDEWALKS CURBED AND GUTTERS PAVED.

Date of order.

May 16, 1907, *Wyatt street, from Plain to Eddy.*

Bills approved on account of highways from October 1 to December 31, 1907, inclusive, amounted to:

Regular appropriation	$131,103 13	
Special appropriation	16,130 02	
		$147,233 15

Classified as follows:

Cleaning streets	$16,685 59	
Repairs on unpaved streets	16,557 89	
Crushed stone—material and labor	15,926 85	
Stone - - paving and crosswalk	15,323 64	
Repairs on paved streets	5,321 33	
Barn expenses	3,246 34	
Blacksmith and wheelwright shop	2,659 00	
Removing snow and ice	2,046 12	
Labor on material	1,485 39	
Tools, implements, etc	1,212 47	
Building driveways, etc	1,064 71	
Horses, wagons, harnesses, etc	828 30	
Steam rollers—repairs and supplies	784 25	
Screening gravel	776 98	
Watering streets	515 44	
Superintendent's salary	437 14	
Fencing streets—material and labor	205 59	
Repairs on buildings, highway yard	188 20	
Watchman at city yard	180 00	
Sundries	178 17	
Repairs on stone crushers	97 40	
Office expenses, city yard	97 20	
Carfares	15 00	
Telephone lines	5 60	
		85,848 60
Amount carried forward		$85,848 60

Amount brought forward		$85,848 60

New Work—Building and Rebuilding Streets, Etc.

Sidewalks Curbed and Gutters Paved.

Berkley street, from River avenue to Harold street.	$1,010 07	
Hamilton street, from Adelaide avenue to Lenox..	625 66	
Pemberton street, from Dover to Beaufort.....	661 73	
Sterling avenue, from Laurel Hill to Webster.....	3,808 80	
Tell street, from Vinton to Courtland.....	1,945 47	
Terrace avenue, from Laurel Hill to the city line...	6,042 01	
Union avenue, from Pocasset to Silver Lake.....	8 50	
		14,102 24

Rebuild with Warren Brothers Bitulithic Pavement.

Angell street, from Prospect to Wayland avenue...	$28,109 54	
Waterman street, from Prospect to Cooke.....	3,042 75	
		31,152 29

Lay Out, Extend, Widen and Improve.

Allens avenue and Eddy street.....		16,130 02
		$147,233 15

Bills deposited with the city treasurer for collection from October 1 to December 31, 1907, inclusive, amounted to . . . $47,757 92

As follows:

Labor and material.....	$43,827 95
Building driveways, etc.....	1,574 75
The Rhode Island Company for widening Eddy street.....	1,298 53
Blacksmith and harness work for other departments	561 00
Street sweepings	220 25
Boarding horses for other departments.....	196 09
Manure from barn.....	75 00
Empty barrels.....	4 35
	$47,757 92

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of $10,103 38

As follows:

The N. Y., N. H. and H. R. R. Company for granite blocks, etc., in Allen's avenue	$3,695 08
Labor and material	3,585 89
Building driveways, etc	1,400 87
Blacksmith and harness work for other departments	808 78
Street sweepings	337 32
Boarding horses for other departments	196 09
Manure from barn	75 00
Empty barrels	4 35
	$10,103 38

SIDEWALKS AND CURBING.

Bills approved on account of sidewalks and curbing from October 1 to December 31, 1907, inclusive, amounted to . . $1,965 75

Charged as follows:

Concreting sidewalks	$961 66
Repairing sidewalks and gutters	627 46
Granite curbing	376 63
	$1,965 75

Bills deposited with the city treasurer for collection from October 1 to December 31, 1907, inclusive, amounted to . . $1,064 34

As follows:

Granite curbing	$988 39
Repairing sidewalks and gutters	75 95
	$1,064 34

During the quarter, coupons from bills collected (for granite curbing), have been returned by the city treasurer and receipted for to the amount of $549 90

CITY ENGINEER.

Bills approved on account of the city engineer's department from October 1 to December 31, 1907, inclusive, amounted to $9,919 07

Charged as follows:

Salary — city engineer	$1,125 00
Salaries of assistants	7,694 22
Salaries of clerks	884 58
Supplies, drawing material, etc.	175 08
Telephone lines	28 06
Sundries	5 45
Carfares	3 65
Instruments and repairs	3 03
	$9,919 07

BRIDGES.

Bills approved on account of bridges from October 1 to December 31, 1907, inclusive, amounted to $6,486 88

Charged as follows:

Acorn street bridge	$239 69
Atwells avenue bridge	170 72
Barn expenses	125 96
Branch avenue bridge	3 77
Amount carried forward	$540 14

Amount brought forward	$540 14
Building at city yard	9 47
Car fares	25 00
Crawford street bridge	1,441 36
Delaine street bridge	416 24
Eagle street bridge	74 78
Francis street bridge	71 60
Horses, wagons, harnesses, etc	21 73
Lumber, hardware, etc	108 20
Manton bridge	138 78
Manton avenue bridge	21 63
Point street bridge	254 14
Promenade street bridge	3 61
Red bridge	145 22
Rent of keeper's house—Washington bridge	36 00
Salaries—Point street bridge	1,053 75
Salaries—Red bridge	584 44
Salaries—Washington bridge	592 74
Smith street bridge	3 58
Sundries	202 43
Telephone lines	2 68
Tools	95 90
Wanskuck bridge	5 67
Washington bridge	624 92
Washington row bridge	4 13
Weybosset bridge	8 74
	$6,456 88

Bills deposited with the city treasurer for collection from October 1 to December 31, 1907, inclusive, amounted to . . . $39 28

As follows:

The Rhode Island Company for repairs on Wanskuck bridge	33 28
Sale of old lumber	6 00
	$39 28

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of . $39 78

As follows:

The Rhode Island Company for repairs on Wanskuck bridge	$33 28
Sale of old lumber	6 50
	$39 78

PUBLIC LIGHTS.

Bills approved on account of the public lights from October 1 to December 31, 1907, inclusive, amounted to $70,079 69

Charged as follows:

Arc lights	$50,148 18
Incandescent lights	13,484 23
Welsbach lights	6,201 71
Salaries	234 86
Setting and removing gas posts	10 71
	$70,079 69

Bills deposited with the city treasurer for collection (for gas posts, lanterns and frames), from October 1 to December 31, 1907, inclusive, amounted to . . . $12 00

During the quarter, coupons from bills collected (for gas posts, lanterns and frames), have been returned by the city treasurer and receipted for to the amount of . . . $12 00

PUBLIC WORKS OFFICE.

Bills approved on account of the public works office from October 1 to December 31, 1907, inclusive, amounted to . . . $5,768 04

Charged as follows:

Salaries of commissioner and secretary	$1,925 00
Salaries of office assistants	3,630 99
Office supplies	192 10
Telephone lines	19 95
	$5,768 04

WALTER F. SLADE,

Commissioner.

ONE HUNDRED AND FIRST

QUARTERLY REPORT

OF THE

Department of Public Works

OF THE

CITY OF PROVIDENCE, R. I.

QUARTER ENDING MARCH 31, 1908.

The Providence Press:
SNOW & FARNHAM CO., CITY PRINTERS,
63 Washington Street,
1908.

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ASTOR, LENOX AND
TILDEN FOUNDATIONS
1908

REPORT.

OFFICE OF THE DEPARTMENT OF PUBLIC WORKS,
CITY HALL, PROVIDENCE, R. I., April 1, 1908.

To THE HONORABLE THE CITY COUNCIL:

In compliance with the requirements of Chapter 41 of the ordinances, the Commissioner of Public Works respectfully presents the one hundred and first quarterly report of the expenditures by the several departments under his direction and control, with statements of work ordered and the condition and cost of same, for the quarter ending March 31, 1908.

WATER WORKS.

January 13th, the proposal of Fuller Iron Works to furnish the special castings required by the water department for 1908, was accepted and a contract executed. Amount $1,732.55.

January 16th, the following proposals for furnishing and delivering fire hydrants and water gates, were accepted, viz.:

Coffin Valve Company,	10 six-inch post hydrants with gates,	@	$54.00	each.
	6 sixteen-inch horizontal gates	@	85.00	"
	19 twelve-inch vertical gates	@	30.00	"
	50 six-inch gates	@	10.75	"
Allen and Reed, Inc.,	15 eight-inch gates	@	16.75	"
The Fairbanks Co.,	12 three-inch gates	@	5.50	"
	12 two and one-half-inch gates	@	4.00	"
	12 two and one-half-inch gates, spl.	@	5.65	"

January 23d, the proposal of Warren Foundry and Machine Company to furnish and deliver 679 tons of cast iron water pipe at $24.90 per net ton, was accepted and a contract subsequently executed.

February 24th, the following proposals for furnishing and delivering pig lead and lead pipe, were accepted, viz.:

Nassau Smelting and Refining Works, 35,000 lbs. pig lead @ $3.87 per cwt.
Phillips Lead and Supply Co., 12,750 lbs. lead pipe @ $4.40 per cwt.
The Congdon & Carpenter Co., 12,750 lbs. lead pipe @ $4.40 per cwt.
The L. H. Tillinghast Supply Co., 12,750 lbs. lead pipe @ $4.40 per cwt.
Miller Iron Co., 12,750 lbs. lead pipe @ $4.40 per cwt.

March 27th, the proposal of Thomas Jennings to remove the top of the chimney at Hope Pumping station, brick up the 8-inch openings and do sundry other work in connection therewith, for the sum of $534.00, was accepted.

The average daily consumption of water during the last quarter was 15,569,972 gallons.

Water pipes were laid during the quarter as follows:

12-INCH.	
In Broad street and Park avenue in the Town of Cranston	1,850.50 feet.
8-INCH.	
In Pawtuxet avenue in the town of Cranston	535.05 feet.
6-INCH.	
In Baxter, Monett and Saratoga streets; in Larkin Lane, Transit street and Bay View avenue, in the town of Cranston	1,059.25 feet.
Total	3,444.80 feet.

or .652 + mile.

ter pipes were removed or abandoned during the quar-
follows:

8-INCH.

Broad street and Pawtuxet avenue, in the town Cranston	60.67 feet.

1 + mile.

tement of sizes and lengths of pipe laid since the com-
ment of the work:

	25,639.70 feet.
	10,208.82 feet.
	61,410.07 feet.
	46,176.13 feet.
	9,626.59 feet.
	44,882.08 feet.
	118,058.02 feet.
	15,062.78 feet.
	315,026.33 feet.
	1,290,902.21 feet.
Total	1,936,983.73 feet.

.852 + miles.

tement of sizes and lengths of pipe laid for the special
service for fire protection since the commencement of
ork:

	4,297.46 feet.
	34,953.70 feet.
	5,397.07 feet.
Total	44,648.23 feet.

56 + miles.

fire hydrant was set during the quarter at Francis
east side, 330 feet south of line of Railroad street.

total number of fire hydrants, exclusive of those for
l service for fire protection, is now two thousand one

hundred and forty-seven—two thousand and four flush, and one hundred and forty-three post.

The total number of fire hydrants on the special water service for fire protection is one hundred and twenty-four.

During the quarter, one hundred and seventy water meters were set, of which number forty-three were to replace other meters. The use of seven meters was discontinued.

The following meters were in use at the close of the quarter:

Kind.	Size.									Total.
	½-in.	¾-in.	1-in.	1½-in.	2-in.	3-in.	4-in.	6-in.	8-in.	
Ball & Fitts	1,520	319	50	9	3	.....	.....	.....	.....	1,921
Ball & Fitts, rotary	.....	.....	3	4	.....	1	1	.....	.....	9
Crown	9,970	1,331	394	175	54	33	32	1	.....	11,990
Empire	1,891	215	91	56	15	1	1	.....	.....	2,270
Fales, Jenks & Sons	.....	.....	1	.....	.....	.....	.....	.....	.....	1
Gem	.....	.....	.....	.....	17	36	19	5	.....	77
Hersey	47	.....	.....	.....	.....	.....	.....	.....	.....	47
Nash	534	.....	.....	.....	.....	.....	.....	.....	.....	534
Thomson	5,076	423	74	54	20	7	7	1	.....	5,662
Trident	102	.....	1	.....	.....	.....	.....	.....	.....	103
Venturi	.....	.....	.....	.....	.....	.....	.....	.....	1	1
Worthington	17	.....	.....	.....	.....	.....	.....	.....	.....	17
	19,157	2,288	634	298	109	78	60	7	1	22,632

One hundred and twenty-three plumber's licenses were issued during the quarter, all of which expire December 31, 1908.

Four hundred and eighty-five permits to do plumbing were issued during the quarter.

Sixty-eight applications for water were made during the quarter, making the total number twenty-eight thousand seven hundred and forty-four.

The number of new service stops opened during the quarter was sixty-four.

The total number of service stops opened to March 31, 1908, inclusive, was twenty-eight thousand and fifty-four. The number in actual use March 31, 1908, was twenty-five thousand seven hundred and thirty-one.

The amount of bills approved on account of water works from January 1 to March 31, 1908, inclusive, was:

For maintenance		$73,823 72

Classified as follows:

PETTACONSET PUMPING STATION.

Coal and wood	$5,646 92	
Firemen	930 05	
Sundries	754 73	
Engineers	590 72	
Superintendence	442 00	
Care of ground	182 74	
Oil, waste and packing	161 09	
Barn expenses	76 56	
Labor on fuel	65 52	
Allis-Chalmers high-duty engine	59 36	
Repairs on boilers	49 39	
Lights	21 47	
Cornish engine-house	5 04	
Cornish pumping-engine	3 00	
Horses, wagons, harnesses, etc	1 50	
		$8,990 09

SAND FILTRATION PLANT.

Installation	$16,804 20	
Cleaning beds	3,614 07	
Labor and supplies, pumping	1,817 15	
Laboratory, labor and supplies	570 14	
Miscellaneous supplies	140 99	
		22,946 55
Amount carried forward		$31,936 64

Amount brought forward.....		$31,936 64

SOCKANOSSET RESERVOIR.

Sundries	$192 77	
Watchman	182 00	
		374 77

HOPE PUMPING STATION.

Engineers	$418 00	
Firemen	397 89	
Lights	76 95	
Holly pumping engine.....	71 18	
Sundries	18 63	
Oil waste and packing.....	3 30	
		985 95

HOPE RESERVOIR.

Watchman	$204 75	
Sundries	24 36	
		229 11

FRUIT HILL RESERVOIR.

Sundries	$321 90	
Watchman	182 00	
		503 90

METER DEPARTMENT.

Setting and repairing meters.....	$1,688 55	
Water meters	237 82	
		1,926 37

PIPE LINE AND SERVICE STOPS.

Repairs	$4,604 22	
Inspection of pipe line and services.....	2,814 30	
Salaries of assistant engineers.....	1,740 75	
Superintendence- salaries	912 73	
		10,072 00
Amount carried forward.....		$46,028 74

ONE HUNDRED AND FIRST QUARTERLY REPORT

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Pettaconsett pumping station	$340,694 00	
Hope pumping station	115,027 44	
Sockanosset, Hope, and Fruit Hill reservoirs	676,466 10	
Main lines and distribution pipes	2,829,997 52	
Real estate in Pawtuxet and Lincoln	15,975 00	
Tools and supplies	56,527 86	
		$4,034,687 92

Bills deposited with the city treasurer for collection from January 1 to March 31, 1908, inclusive, amounted to $486,803 29

As follows:

Water	$480,294 20	
Water meters	2,581 50	
Setting and repairing meters	1,785 27	
Labor and material, laying services, etc.	1,574 75	
Two horses sold the highway department	200 00	
Penalties	184 00	
Rent of real estate	172 60	
Permanently closing service stops	5 00	
Repairs on pipe line	3 27	
Empty oil barrels	2 70	
		$486,803 29

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of $487,948 73

As follows:

Water	$479,923 84	
Water meters	2,752 75	
Setting and repairing meters	2,670 87	
Labor and material, laying services, etc.	1,508 43	
The Rhode Island Company for one-half of expense of electrolysis investigation	418 92	
Two horses sold the highway department	200 00	
Penalties	184 00	
Rent of real estate	183 00	
Repairs on pipe line	94 22	
Permanently closing service stops	10 00	
Empty oil barrels	2 70	
		$487,948 73

SEWERS.

One hundred and thirty-three drain layer's licenses were issued during the quarter, all of which expire December 31, 1908.

During the quarter, one hundred and twenty-seven permits were issued to drain layers—forty-one for new work and eighty-six for extensions and repairs of drains.

Assessments for the cost of constructing sewers were certified to the city treasurer during the quarter as follows:

Progress avenue, from Webster to Whitehall street.....	$2,201 55
Montague and Greenwood streets	2,093 79
Plainfield street, from near Lowell avenue to Laurel Hill	3,504 92
Laurel avenue, from Lorraine street to Blackstone boulevard	1,351 69
Mount Pleasant avenue, from Atwells to Dover street...	4,310 33
Veazie street and Douglas avenue.....	6,325 13
Berkley street, from near Harold to River avenue....	446 72
Anthony avenue, from Avon street to Cranston.....	437 19
Tell street, from a point about 100 feet west of Vinton to a point about 40 feet east of Courtland.....	1,273 82
West River street, from Cross to Burke.....	4,077 49
Hillside avenue, from the summit to North Main street..	2,354 30
Sterling avenue, Terrace avenue and Magnolia street.....	9,621 52
	$37,998 45

January 7th, the proposal of William M. Harris, Jr., to furnish and deliver on the work, as required during the year 1908, Portland cement at $1.72 per barrel, and Rosendale cement at $1.14 per barrel, was accepted and a contract subsequently executed.

January 8th, the proposal of John McLaughlin to furnish and deliver in the city yard 218 chestnut and white oak piles for an aggregate amount of $1,675.20, was accepted and a contract subsequently executed.

January 13th, the proposal of Fuller Iron Works to furnish the special castings required by the sewer department for the year 1908 was accepted and a contract executed. Amount $2,911.45.

January 31st, the proposal of James C. Goff Company to furnish and deliver in the city yard one cargo of Sanford bricks at $8.75 per M. was accepted.

March 21st, the proposal of J. Spencer Turner Company to furnish and deliver in the city yard 12,000 yards of filter cloth 40 inches wide for the sum of 22½ cents per yard, was accepted.

March 26th, the proposal of Tank and McKinnon Construction Company to furnish the labor and tools for building a sewerage wharf near Field's Point for the sum of $1,907.20, was accepted and a contract subsequently executed.

March 27th, the proposal of James H. Tower to furnish the wrought iron fastenings for the sewerage wharf for the sum of $543.01 was accepted.

Work upon the following sewers was in progress at the close of the quarter, namely:

No. of resolution.	Date of approval.	
124.	April 2, 1907.	*Academy avenue, from Justice street to Whitford avenue, and in Molloy street and Academy avenue, from Rowan street to Justice.*
213.	June 7, "	*Eaton street, from summit at Roslyn to Douglas avenue.*
214.	" " "	*Elmhurst avenue and Smith street, from near Eaton to present end of sewer in Smith.*

resolution.	Date of approval.	
July 2,	1907,	*Elmgrove avenue, from Sessions street to Savoy, and in Savoy, from Elmgrove avenue to Morris.*
"	"	" *Academy avenue, from Smith street to Whitford avenue.*
Nov. 9,	"	*Blackstone boulevard, east side, from the north line of Margrave avenue to present end of sewer about 100 feet north of President avenue, and on west side, from Glen avenue to a point 50 feet north of Upton avenue.*

ork upon the following sewers, completing the work or-
l by the city council, had not commenced March 31,
namely:

resolution.	Date of approval.	
June 7,	1907,	*Alverson avenue, from present end to Plainfield street.*
"	"	" *Lowell avenue, from Plainfield street to Hartford avenue.*
Nov. 9,	"	*Academy avenue, from a point 90 feet north of Chalkstone to Molloy street.*
"	"	" *Dodge street, from the northerly line of Bridgham street school estate to Westminster street.*
"	"	" *Clarence street, from a point about 100 feet east of Webster avenue to Priscilla.*
"	"	" *Fairmount avenue, from Mount Pleas-*
"	"	" *ant to Leah street, and in Leah street, from Fairmount avenue to Atwells.*
"	"	" *Langdon street, from Hagan to Branch avenue.*
"	"	" *Corliss street, from Cross to West River.*

The amount of bills approved on account of sewers from January 1 to March 31, 1908, inclusive, was:

For construction $49,471 89

Charged as follows:

Material	$7,208 67
Additional catch-basins	768 31
Contract reservations	671 00
Sundries	426 89
Testing cement	291 66
Tools	4 75
Building wharf for residue disposal at sewage precipitation tanks	12,731 96
Sewer in Academy avenue and Molloy street	8,930 47
Sewer in Academy avenue, from Smith street to Whitford avenue	6,329 55
Sewer in Blackstone boulevard, east and west sides	861 93
Sewer in Eaton street, from summit at Roslyn to Douglas avenue	2,057 46
Sewer in Elmgrove avenue and Savoy street	4,380 88
Sewer in Elmhurst avenue and Smith street	4,808 36
	$49,471 89

For maintenance $28,441 12

Classified as follows:

Cleaning basins and sewers	$6,052 90
Repairing basins and sewers	2,624 84
Cleaning and repairing old drains	1,271 74
Inspection of connections	676 00
Barn expenses	560 72
Salary superintendent	442 00
Tools	428 45
Horses, wagons, harnesses, etc	207 61
Removing snow and ice from inlets	89 98
Sundries	67 98
Repairs on gate houses	62 39
Office expenses	49 39
Telephone lines	46 64
Cleaning private connections	39 76
Amount carried forward	$12,620 40

Amount brought forward.....	$12,620 40
Carpenter shop	39 22
Repairs on buildings, sewer maintenance yard	27 83
Car fares	20 00
Filling cisterns, etc.....	5 65

ERNEST STREET STATION.

Coal and wood.....	2,367 77
Engineers	865 98
Cleaning and repairing pumps.....	683 08
Cleaning screens	680 01
Firemen	587 98
Repairs on engines.....	344 43
Repairs on boilers	166 07
Repairs on buildings.....	133 56
Care of grounds	127 36
Supplies	96 06
Lights	27 10
Care of buildings	23 20

SEWAGE PRECIPITATION TANKS.

Chemicals	$5,180 00
Labor in sludge disposal	2,255 42
Labor on sewage precipitation.....	1,363 52
Electrical power	389 50
Repairs on machinery.....	284 73
Experimental treatment of sludge.....	96 14
Miscellaneous supplies	35 01
Lights	17 67
Care of grounds	1 82
Repairs on buildings.....	1 61
	$28,441 12

The *net* expenditure for construction of sewers to March 31, 1908, inclusive, was..... $8,066,641 48

The *net* expenditure for maintenance of sewers to March 31, 1908, inclusive, was..... $1,547,212 27

Bills deposited with the city treasurer for collection from January 1 to March 31, 1908, inclusive, amounted to $495 35

As follows:

Miscellaneous work	$164 21
Cleaning private connections	80 75
Pumping out cellars	16 18
Second-hand manhole frame and cover	3 50
Sewer material	118 61
Building basins for The Rhode Island Company	101 78
Laying drains to curbstone	10 32
	$495 35

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of $1,012 29

As follows:

Miscellaneous work	$570 12
Cleaning private connections	89 00
Pumping out cellars	10 53
Second-hand manhole frame and cover	3 50
Building basins for The Rhode Island Company	210 21
Sewer material	118 61
Laying drains to curbstones	10 32
	$1,012 29

HIGHWAYS.

One permit to open streets was issued during the quarter.

During the quarter, statements were prepared of the cost of curbstones set, ascertained by the commissioner and certified to the board of aldermen for approval, as follows:

Abbott street, from Branch avenue to North Main street	$201 10
Berkley street, from River avenue to Harold street	486 42
Greenwood street, from Manton avenue to Atwells	610 32
Hamilton street, from Adelaide avenue to Lenox	312 59
Lenox avenue, from Elmwood to Melrose street	1,227 86
Amount carried forward	$2,838 29

Amount brought forward	$2,838 29
Melrose street, from Sumter to Sackett	1,065 43
Montague street, from Hope to Morris avenue	965 54
Mount Pleasant avenue, from Atwells to Dover street	2,308 95
Niagara street, from Congress avenue to Lexington	365 33
Niagara street, from Lexington avenue to Atlantic	292 02
Pemberton street, from Dover to Beaufort	367 74
Progress avenue, from Webster to Whitehall street	1,421 57
Sterling avenue, from Laurel Hill to Webster	1,521 73
Tell street, from Vinton to Courtland	1,030 62
Union avenue, from Pocasset to Silver Lake	1,079 81
Allens avenue, from Henderson street to Globe	89 89
Anthony avenue, from Cranston street to its westerly termination	855 43
Chatham street, from Branch avenue to Silver Spring street	1,288 41
Humboldt avenue, from Wayland to Elton street	614 75
Kelly street, from angle in said street to Bancroft	86 17
Terrace avenue, from Laurel Hill to the city line	2,179 49
	$18,371 17

February 19th, the proposal of the American Brake Shoe and Foundry Company to furnish sundry repairs for the Gates crusher for the sum of $1,549.80 was accepted.

March 5th, the following proposals for furnishing and delivering circular curbing and crosswalk stone in the city yard, were accepted, viz.:

R. B. Marriott and Sons, 500 linear feet of 14-inch crosswalk stone @ 30 cents per foot.
" " " " 500 linear feet of 18-inch crosswalk stone @ 38 cents per foot.
" " " " 125 pieces of 2-foot curb corners @ $1.99 each.
" " " " 35 pieces of 10-foot radius curbing @ $3.25 each.
" " " " 30 pieces of 8-foot radius curbing @ $2.50 each.
Nelson A. Bennett, 35 pieces of 10-foot radius curbing @ $3.25 each.
" " " 30 pieces of 8-foot radius curbing @ $2.50 each

The following work, ordered by the board of aldermen and city council, had not commenced March 31, 1908, namely:

Sidewalks Curbed and Gutters Paved.

Date of order.		
May	16, 1907,	*Wyatt street, from Plain to Eddy.*
Jan.	16, 1908,	*Hillside avenue, from North Main street about 700 feet easterly.*
"	" "	*Leah street, from Atwells avenue to north line of Fairmount avenue.*
"	" "	*Fairmount avenue, from Mount Pleasant to Leah street.*
"	" "	*Clarence street, from Webster avenue to Priscilla.*

Bills approved on account of highways from January 1 to March 31, 1908, inclusive, amounted to:

Regular appropriation, ... $54,212 7

Charged as follows:

Crushed stone, material and labor	$15,513 75
Cleaning streets	9,840 21
Screening gravel	8,413 96
Repairs on unpaved streets	3,408 11
Barn expenses	3,070 54
Blacksmith and wheelwright shop	3,000 87
Removing snow and ice	2,577 77
Steam rollers—repairs and supplies	2,312 20
Labor on material	1,734 53
Tools, implements, etc	974 39
Stone—paving and crosswalk	824 90
Horses, wagons, harnesses, etc	721 09
Repairs on stone crushers	714 52
Superintendent's salary	442 00
Watchman at city yard	182 00
Repairs on buildings, highway yard	145 26
Repairs on paved streets	90 56
Office expenses—city yard	85 05
Car fares	55 00
Sundries	52 75
Building driveways, etc	47 73
Telephone lines	5 60
	$54,212 79

Bills deposited with the city treasurer for collection from January 1 to March 31, 1908, inclusive, amounted to . . $1,568 69

As follows:

Blacksmith and harness work for other departments	$586 40
Street sweeping	430 75
Boarding horses for other departments	251 32
Building driveways, etc.	182 32
Manure from barn	76 00
Removing snow and ice	37 40
Empty oil barrels	4 50
	$1,568 69

During the quarter, coupons from bills collected have been returned by the city treasurer, and receipted for to the amount of $43,476 47

As follows:

Labor and material	$40,417 89
The Rhode Island Company for widening Eddy street	1,298 53
Blacksmith and harness work for other departments	561 00
Street sweepings	426 50
Building driveways, etc.	403 33
Boarding horses for other departments	251 32
Manure from barn	76 00
Removing snow and ice	37 40
Empty oil barrels	4 50
	$43,476 47

SIDEWALKS AND CURBING.

Bills approved on account of sidewalks and curbing from January 1 to March 31, 1908, inclusive, amounted to $843 73

Charged as follows:

Concreting sidewalks	$751 18	
Repairing sidewalks and gutters	92 55	
	$843 73	

Bills deposited with the city treasurer for collection from January 1 to March 31, 1908, inclusive, amounted to $18,390 19

As follows:

Curbing bills	$18,367 80	
Concreting sidewalks	22 39	
	$18,390 19	

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of $3,128 91

As follows:

Curbing bills	$2,582 20	
Granite curbing	448 37	
Repairing sidewalks and gutters	75 95	
Concreting sidewalks	22 39	
	$3,128 91	

CITY ENGINEER.

Bills approved on account of the city engineer's department from January 1 to March 31, 1908, inclusive, amounted to $10,432 00

Charged as follows:

Salary—city engineer	$1,125 00
Salaries of assistants	7,967 00
Salaries of clerks	894 40
Car fares	202 20
Supplies, drawing material, etc.	197 07
Telephone lines	36 43
Sundries	4 40
Instruments and repairs	3 00
Meteorological instruments and repairs	2 50
	$10,432 00

Bills deposited with the city treasurer for collection (for one self-reading rod), from January 1 to March 31, 1908, inclusive, amounted to $6 50

During the quarter, coupons from bills collected (for one self-reading rod), have been returned by the city treasurer and receipted for to the amount of $6 50

BRIDGES.

January 20th, the proposal of James A. Potter and Company to furnish and deliver at the several drawbridges yellow pine lumber at $29.00 per M. feet, was accepted and a contract subsequently executed.

Bills approved on account of bridges from January 1 to March 31, 1908, inclusive, amounted to $5,816 18

Charged as follows:

Barn expenses	$141 94
Building at city yard	6 90
Crawford street bridge	186 84
Horses, wagons, harnesses, etc	19 89
Lumber, hardware, etc	180 76
Manton bridge	1 60
Merino bridge	1 60
Point street bridge	227 54
Post office bridge	4 66
Red bridge	635 97
Rent of keeper's house, Washington bridge	36 00
Salaries—Point street bridge	1,069 25
Salaries—Red bridge	564 85
Salaries—Washington bridge	582 85
Sundries	316 67
Telephone lines	2 68
Tools	267 36
Wanskuck bridge	56
Washington bridge	1,545 05
West River street bridge	3 37
Weybosset bridge	19 84
	$5,816 18

Bills deposited with the city treasurer for collection from January 1 to March 31, 1908, amounted to $184 36

As follows:

Sale of paint stock	$183 61
Sale of old lumber	75
	$184 36

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of $184 36

As follows:

Sale of paint stock	$183 61
Sale of old lumber	75
	$184 36

PUBLIC LIGHTS.

Bills approved on account of the public lights from January 1 to March 31, 1908, inclusive, amounted to $69,794 15

Charged as follows:

Arc lights	$49,650 23	
Incandescent lights	13,523 64	
Welsbach lights	6,161 27	
Salaries	447 00	
Setting and removing gas posts	10 94	
Sundries	1 07	
	$69,794 15	

Bills deposited with the city treasurer for collection (for gas posts, lanterns, frames and fixtures), from January 1 to March 31, 1908, inclusive, amounted to $123 75

During the quarter, coupons from bills collected (for gas posts, lanterns, frames and fixtures), have been returned by the city treasurer and receipted for to the amount of $123 75

PUBLIC WORKS OFFICE.

Bills approved on account of the public works office from January 1 to March 31, 1908, inclusive, amounted to $5,618 96

Charged as follows:

Salaries of commissioner and secretary....	$1,925 00
Salaries of office assistants.....	3,425 72
Office supplies	248 68
Telephone lines	19 56
	$5,618 96

FORESTRY.

Bills approved on account of the forestry department from January 1 to March 31, 1908, inclusive, for supplies, have been paid from the special appropriation for that work to the amount of $164 88

WALTER F. SLADE,

Commissioner.

ONE HUNDRED AND SECOND

QUARTERLY REPORT

OF THE

Department of Public Works

OF THE

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QUARTER ENDING JUNE 30, 1908.

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1908

REPORT.

OFFICE OF THE DEPARTMENT OF PUBLIC WORKS,
CITY HALL, PROVIDENCE, R. I., July 1, 1908.

TO THE HONORABLE THE CITY COUNCIL:

In compliance with the requirements of Chapter 41 of the ordinances, the Commissioner of Public Works respectfully presents the one hundred and second quarterly report of the expenditures by the several departments under his direction and control, with statements of work ordered and the condition and cost of same, for the quarter ending June 30, 1908.

WATER WORKS.

April 15th, the proposal of the Warren Foundry and Machine Company to extend their contract for furnishing cast-iron water pipe, dated January 23, 1908, to include 120 pieces additional of 12-inch B pipe, was accepted.

April 27th, the proposal of the D. M. Dillon Steam Boiler Works, of Fitchburg, Mass., to furnish and erect at Hope pumping station one vertical boiler for the sum of $2,257.91, was accepted.

April 29th, the proposal of The Warner-Miller Company to furnish and deliver at Sockanosset, R. I., 48,000 square feet of expanded metal for $2\frac{65}{100}$ cents per square foot, was accepted.

June 16th, the following proposals for furnishing the coal required for one year from July 1, 1908, were accepted, viz.:

Seaconnet Coal Company, New River run of mine, for Pettaconset pumping station.....	$4.46 per net ton delivered.
Eastern Coal Company, anthracite, for filter beds at Pettaconset.....	7.00 " " " "
John R. White & Son, Inc., anthracite to be taken at their yard.....	5.85 " " "

The average daily consumption of water during the last quarter was 15,268,292 gallons.

Water pipes were laid during the quarter as follows:

24-INCH.	
In Cranston street in town of Cranston.....	52.33 feet.
16-INCH.	
In Cross and West River streets.....	1,992.13 feet.
12-INCH.	
In Holden and Promenade streets; in Cranston street and Park avenue in the town of Cranston.....	5,984.23 feet.
8-INCH.	
In Edith, Hillwood, Killingly, West Park, Woodland and Smith streets and President avenue.....	1,240.62 feet.
6-INCH.	
In Augusta, Ardoene, Belden, Coggeshall, Durham, Devonshire, Fisk, Knight, Murray, Medway, Newcomb, Nolan, Pilgrim, Social and Wayne streets; Allens, Boylston, Carolina, Edison, Farmington, Home, Lenox, Pembroke, Taber and Wayland avenues; in Circuit drive; Edgewood and Park View boulevards; Marcy street: Englewood, Greylock, Grand, Ingleside, Knightsville, Netherlands, Reservoir, Second and Wheeler avenues in the town of Cranston; in Emanuel, King and Victor streets in the town of North Providence.....	5,713.27 feet.
Total.....	14,982.58 feet.

or 2.837 + miles.

Water pipes were removed or abandoned during the quarter as follows:

12-INCH.	
From Cross street	2.84 feet.
8-INCH.	
From Cross, Holden, Promenade and West River streets	3,402.57 feet.
6-INCH.	
From West Park and Woodland streets	66.03 feet.
Total	3,471.44 feet.

or .657 + mile.

Statement of sizes and lengths of pipe laid since the commencement of the work:

42-inch	25,630.70 feet.
36-inch	10,208.82 feet.
30-inch	61,410.07 feet.
24-inch	46,228.46 feet.
20-inch	9,626.59 feet.
16-inch	46,874.21 feet.
12-inch	124,039.41 feet.
10-inch	15,062.78 feet.
8-inch	312,864.38 feet.
6-inch	1,296,549.45 feet.
Total	1,948,494.87 feet.

or 369.033 + miles.

Water pipes for special water service for fire protection were laid during the quarter as follows:

24-INCH.	
In Canal street	1.98 feet.
16-INCH.	
In Manton avenue	100.28 feet.
12-INCH.	
In Olneyville square	25.18 feet.
Total	127.44 feet.

or .024 + mile.

Statement of sizes and lengths of pipe laid for the special water service for fire protection since the commencement of the work:

24-inch	4,299.44 feet.
16-inch	35,053.98 feet.
12-inch	5,422.25 feet.
Total	44,775.67 feet.

or 8.480 + miles.

Eleven fire hydrants have been set during the quarter, one in each of the following locations:

Arlington avenue, east side, on south building line of President.
Blackstone street, north side, 383 feet west of building line of Prairie avenue.
Elmgrove avenue, east side, 3 feet north of Doane.
Holden street, east side, 7 feet north of building line of Promenade.
Irving avenue, north side, 8 feet east of Elmgrove.
Oregon street, north side, on range of south line of Derry.
Park avenue, Cranston, north side, opposite east line of Tucker street.
Smith street, south side, on range of east line of Brightwood avenue.
Taber avenue, east side, 10 feet north of President.
West River street, east side, 43 feet north of Burke.
West River street, east side, 131 feet south of Corliss.

The total number of fire hydrants, exclusive of those for special service for fire protection, is now two thousand one hundred and fifty-eight — two thousand and fourteen flush, and one hundred and forty-four post.

The total number of fire hydrants on the special water service for fire protection is one hundred and twenty-four.

During the quarter, one hundred and ninety-five water meters were set, of which number thirty-seven were to replace other meters. The use of twelve meters was discontinued.

The following meters were in use at the close of the quarter:

Kind.	Size.									Total.
	⅝-in.	¾-in.	1-in.	1¼-in.	2-in.	3-in.	4-in.	6-in.	8-in.	
Ball & Fitts	1,503	311	70	8	3	.....	.....	.....	.....	1,895
Ball & Fitts, rotary	.....	.....	1	.....	.....	1	1	.....	.....	3
Crown	9,984	1,343	398	180	55	33	33	1	.....	12,027
Empire	1,941	219	92	60	15	1	1	.....	.....	2,329
Fales, Jenks & Sons	.....	.....	1	.....	.....	.....	.....	.....	.....	1
Gem	.....	.....	.....	.....	19	36	19	5	.....	79
Hersey	59	.....	.....	.....	.....	.....	.....	.....	.....	59
Nash	543	.....	.....	.....	.....	.....	.....	.....	.....	543
Thomson	5,115	422	74	53	20	7	7	1	.....	5,699
Trident	102	.....	1	.....	.....	.....	.....	.....	.....	103
Venturi	.....	.....	.....	.....	.....	.....	.....	.....	1	1
Worthington	39	.....	.....	.....	.....	.....	.....	.....	.....	39
	19,286	2,295	637	301	112	78	61	7	1	22,778

Seven plumber's licenses were issued during the quarter, making the total number one hundred and thirty, all of which expire December 31, 1908.

Seven hundred and twenty-three permits to do plumbing were issued during the quarter.

Two hundred and fifteen applications for water were made during the quarter, making the total number twenty-eight thousand nine hundred and fifty-nine.

The number of new service stops opened during the quarter was two hundred and five.

The total number of service stops opened to June 30, 1908, inclusive, was twenty-eight thousand two hundred and fifty-nine. The number in actual use June 30, 1908, was twenty-six thousand and fifty-one.

The amount of bills approved on account of water works from April 1 to June 30, 1908, inclusive, was:

For maintenance $112,527 66

Classified as follows:

PETTACONSET PUMPING STATION.

Coal and wood	$5,593 62	
Firemen	917 28	
Sundries	732 62	
Engineers	591 98	
Superintendence	442 00	
Care of grounds	300 28	
Oil, waste and packing	152 77	
Real estate	125 96	
Cornish engine house	96 19	
Barn expenses	77 88	
Allis-Chalmers high-duty engine	67 36	
Labor on fuel	65 52	
Repairs on boilers	33 56	
Horses, wagons, harnesses, etc	11 03	
Lights	7 94	
Worthington high-duty engine	5 04	
Corliss pumping engine and house	1 25	
		$9,222 28

SAND FILTRATION PLANT.

Installation	$51,011 55	
Cleaning beds	2,673 74	
Labor and supplies, pumping	1,873 19	
Laboratory — labor and supplies	557 60	
Miscellaneous supplies	99 62	
		56,215 70

SOCKANOSSET RESERVOIR.

Sundries	$322 15	
Watchman	182 00	
		504 15

HOPE PUMPING STATION.

New engine and boiler, to furnish and erect	$1,387 66	
Engineers	533 00	
Sundries	510 62	
Coal and wood	485 62	
Firemen	375 69	
Lights	61 56	
Repairs on boilers	12 24	
Oil, waste and packing	3 71	
Holly pumping engine	1 43	
		3,371 53
Amount carried forward		$69,313 66

Amount brought forward		$69,313 66
Hope Reservoir.		
Sundries	$1,291 49	
Watchman	204 75	
		1,496 24
Fruit Hill Reservoir.		
Sundries	$637 45	
Watchman	182 00	
		819 45
Meter Department.		
Water meters	$2,462 44	
Setting and repairing meters	1,800 12	
		4,262 56
Pipe Line and Service Stops.		
Repairs	$4,123 83	
Salaries of assistant engineers	1,929 50	
Superintendence — salaries	912 73	
Inspection of pipe line and services,	854 33	
		7,820 39
Pipe Yard.		
Cast iron water pipe	$10,702 17	
Laying water pipe	6,660 53	
Special water service for fire protection	2,195 58	
Special castings	1,815 07	
Laying service pipe	1,784 20	
Labor on and carting pipe	642 63	
Fire hydrants, boxes and covers	536 80	
Taps and stops	299 85	
Tools	284 51	
Stop valves	215 46	
Pipe yard, office expenses	35 44	
Repairs on pipe yard buildings	13 25	
		25,185 49
Miscellaneous.		
Clerks' and inspectors' salaries	$1,740 74	
Barn expenses	770 35	
Horses, wagons, harnesses, etc	329 01	
Prevention of defilement of the Pawtuxet	300 00	
Car fares	225 00	
Telephone lines	153 93	
Public drinking fountains and troughs	109 04	
Sundries	1 80	
		3,629 87
		$112,527 66

The total expenditures to June 30, 1908, inclusive, was $11,510,810 82

The *net* expenditure for maintenance from April 1, to June 30, 1908, inclusive, was	$103,917 14
The *net* expenditure for maintenance to June 30, 1908, inclusive, was	3,699,480 54

The value of the water works system January 1, 1908, as estimated by the city engineer, was as follows:

Pettaconset pumping station	$340,694 00	
Hope pumping station	115,027 44	
Sockanosset, Hope and Fruit Hill reservoirs	676,466 10	
Main lines and distribution pipes	2,829,997 52	
Real estate in Pawtuxet and Lincoln	15,975 00	
Tools and supplies	56,527 86	
		$4,034,687 92

Bills deposited with the city treasurer for collection from April 1 to June 30, 1908, inclusive, amounted to $82,719 69

As follows:

Water	$73,612 99	
Labor and material, laying services, etc	3,472 36	
Water meters	3,349 40	
Setting and repairing meters	1,961 12	
Removing snow from in front of voting booths	118 92	
Rent of real estate	108 30	
Penalties	88 00	
Permanently closing service stops	5 00	
Empty oil barrels	3 60	
		$82,719 69

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of $84,167 13

As follows:

Water	$75,468 61	
Water meters	3,349 40	
Labor and material, laying services, etc.	2,857 78	
Setting and repairing meters	2,167 52	
Removing snow from in front of voting booths	118 92	
Rent of real estate	108 30	
Penalties	88 00	
Permanently closing service stops	5 00	
Empty oil barrels	3 60	
		$84,167 13

SEWERS.

During the quarter ending June 30, 1908, two hundred and ninety-six permits were issued to drain-layers — one hundred and sixty-nine for new work and one hundred and twenty-seven for extensions and repairs of drains.

Ten drain-layer's licenses were issued during the quarter, all of which expire December 31, 1908.

During the quarter, the proposal of the James C. Goff Company, to furnish and deliver on the city wharf, two cargoes of Sanford bricks at $8.75 per M., was accepted.

May 4, contracts for the construction of sewers were awarded to the following parties and subsequently executed, namely:

[The amounts given below are what are estimated will be paid the contractors for labor, and do not include the cost of inspection and materials.]

To Frederick E. Shaw.

No. of resolution.	Date of approval.		
141.	April 17, 1908,	*Curtis street, from Bosworth to Pelham, in Pelham street from Manton avenue to Aleppo street, and in Aleppo from Pelham street about 300 feet easterly to storm sewer,* .	$1,488 20

No. of resolution.	Date of approval.		
142.	April 17, 1908,	*Greeley street, from near Charles to Opper, and in Opper from Greeley to Branch avenue,* . .	$1,040 20
143	" " "	*Boylston avenue, from Olney street to Montague,*	$267 90
145	" " "	*President avenue from Cole to present end of sewer about 40 feet west of Wayland,* . .	$493 50

To Charles Crankshaw.

144.	April 17, 1908,	*Wisdom avenue, from near Academy avenue to Alton street, and in Alton street, from Wisdom avenue to Regent,* .	$1,237 00

May 16th, the proposal of the Rhode Island Supply and Engineering Company to furnish and install at Ernest street station, a new steam main in accordance with blue prints furnished, for the sum of $1,185.00, was accepted.

May 18th, the proposal of The F. W. Wait Lime Company to extend their contract for furnishing lime, for one year, to May 1, 1909, was accepted.

June 15th, the proposal of The Warner-Miller Company to furnish and deliver in the city yard 200 pieces of 12 x 6-inch branch sewer pipe at $1.50 each, and 12-inch straight pipe at 23 cents per foot, was accepted.

The proposal of the J. S. Packard Dredging Company to furnish one scow with mooring lines and lights, and the service of one man for $510 per month, and the services of a

tow boat at $50 per trip, in the removal of the residue disposal from the precipitation plant at Field's Point, was accepted.

June 16th, the following proposals were accepted for furnishing the coal required for one year from July 1, 1908, viz.:

Seaconnet Coal Company, New River run of mine, for Ernest street station.....	at $4.04 per net ton delivered.
Seaconnet Coal Company, New River lump, for sewage precipitation tanks.....	" 4.04 " " " "
Seaconnet Coal Company, New River run of mine or lump, taken at their yard.....	" 3.75 " " "
John R. White & Son, Inc., anthracite, for sewage precipitation tanks.....	" 6.50 " " " "
John R. White & Son, Inc., anthracite, taken at their yard.....	" 5.85 " " "

During the quarter the construction of the following sewers was completed, namely:

No. of resolution.	Date of approval.		Date of completion.
124.	April 2, 1907,	*Academy avenue, from Justice street to Whitford avenue, and in Molloy street and Academy avenue, from Rowan street to Justice,* . .	May 7, 1908
211.	June 7, 1907,	*Alverson avenue, from present end to Plainfield street,* . . .	May 2, "
213.	" " "	*Eaton street, from summit at Roslyn to Douglas avenue,* . .	April 16, "
214.	" " "	*Elmhurst avenue and Smith street, from near Eaton to present end of sewer in Smith,* .	April 15, "

No. of resolution.	Date of approval.		Date of completion
215.	June 7, 1907,	*Lowell avenue, from Plainfield street to Hartford avenue,* . .	June 22, 1908
256.	July 2,	" *Academy avenue, from Smith street to Whitford avenue,* . .	June 3, "
419.	Nov. 9,	" *Academy avenue from a point 90 feet north of Chalkstone to Molloy street,* . . .	June 5, "
420.	Nov. 9,	" *Blackstone boulevard, east side, from the north line of Morgrave avenue to present end of sewer about 100 feet north of President avenue, and on west side from Glen avenue to a point 50 feet north of Upton avenue,*	April 21, "
422.	" "	" *Clarence street, from a point about 100 feet east of Webster avenue to Priscilla,* . . .	June 2, "
423.	" "	" *Fairmount avenue, from Mount Pleasant to Leah street, and in Leah street from Fairmount avenue to Atwells,* . . .	May 30, "
424.	" "	" *Langdon street from Hagan to Branch avenue,*	June 30, "

Work upon the following sewers was in progress at the close of the quarter, namely:

No. of resolution.	Date of approval.	
254.	July 2, 1907,	*Elmgrove avenue, from Sessions street to Savoy, and in Savoy, from Elmgrove avenue to Morris.*
421.	Nov. 9, "	*Dodge street, from the northerly line of Bridgham street school estate to Westminster street.*
141.	April 17, 1908,	*Curtis street, from Bosworth to Pelham, in Pelham street from Manton avenue to Aleppo street and in Aleppo street, from Pelham about 300 feet easterly to storm sewer.*
142.	" " "	*Greeley street, from near Charles to Opper and in Opper street, from Greeley to Branch avenue.*
143.	" " "	*Boylston avenue, from Olney street to Montague.*

Work upon the following sewers, completing the work ordered by the city council, had not commenced June 30, 1908, namely:

No. of resolution.	Date of approval.	
425.	Nov. 9, 1907,	*Corliss street, from Cross to West River.*
144.	April 17, 1908,	*Wisdom avenue, from near Academy to Alton street and in Alton, from Wisdom avenue to Regent.*
145.	" " "	*President avenue, from Cole to present end of sewer about 40 feet west of Way land.*

The amount of bills approved on account of sewers from April 1 to June 30, 1908, inclusive, was:

For construction, ... $51,362 14

Charged as follows:

Material	$6,284 29
Contract reservations	630 00
Additional catch-basins	493 92
Sundries	449 20
Testing cement	292 59
Tools	19 40
Building wharf for residue disposal at sewage precipitation tanks	3,678 37
Sewer in Academy avenue, from near Chalkstone to Molloy street	607 92
Sewer in Academy avenue and Molloy street	5,302 67
Sewer in Academy avenue, from Smith street to Whitford avenue	5,471 32
Sewer in Alverson avenue, from present end to Plainfield street	620 19
Sewer in Blackstone boulevard, east and west sides	655 26
Sewer in Boylston avenue, from Olney street to Montague	915 50
Sewer in Clarence street, from near Webster avenue to Priscilla	458 72
Sewer in Curtis, Pelham and Aleppo streets	791 22
Sewer in Dodge street, from the northerly line of Bridgham street school estate to Westminster street	502 46
Sewer in Eaton street, from summit at Roslyn to Douglas avenue	7,513 15
Sewer in Elmgrove avenue and Savoy street	5,767 60
Sewer in Elmhurst avenue and Smith street	4,082 82
Sewer in Fairmount avenue and Leah street	2,040 72
Sewer in Greeley and Opper streets	323 09
Sewer in Langdon street, from Hagan to Branch avenue	2,008 65
Sewer in Lowell avenue, from Plainfield street to Hartford avenue	2,453 08
	$51,362 14

For maintenance, ... $33,065 29

Classified as follows:

Cleaning basins and sewers	$6,441 85
Repairing basins and sewers	4,329 99
Sundries	1,421 04
Tools	820 10
and repairing old drains	765 87
ant carried forward	$13,778 83

Amount brought forward	$13,778 83
Inspection of connections	728 00
Barn expenses	494 47
Salary, superintendent	442 00
Horses, wagons, harnesses, etc	326 44
Telephone lines	41 18
Carpenter shop	33 12
Office expenses	25 22
Cleaning private connections	21 56
Filling cisterns, etc	12 00
Car fares	10 60
Repairs on buildings, sewer maintenance yard	1 92

ERNEST STREET STATION.

Coal and wood	2,045 15
Engineers	867 05
Cleaning and repairing pumps	754 29
Cleaning screens	665 28
Firemen	589 68
Repairs on engines	538 64
Care of grounds	284 43
Supplies	87 33
Repairs on boilers	41 63
Lights	21 88
Care of buildings	15 51

SEWAGE PRECIPITATION TANKS.

Chemicals	3,640 00
Miscellaneous supplies	2,884 45
Labor in sludge disposal	2,700 30
Labor on sewage precipitation	1,335 82
Electrical power	421 75
Care of grounds	105 62
Repairs on machinery	94 66
Repairs on tanks	47 24
Lights	9 38
Repairs on buildings	44
	$33,065 29

The *net* expenditure for construction of sewers to June 30, 1908, inclusive, was	$8,117,686 54
The *net* expenditure for maintenance of sewers to June 30, 1908, inclusive, was	1,579,783 26

Bills deposited with the city treasurer for collection from April 1, to June 30, 1908, inclusive, amounted to . . . $917 48

As follows:

Second-hand Babcock and Wilcox boilers	$250 00
Miscellaneous work	184 08
Cleaning private connections	78 60
Electrical power furnished at carpenter shop	48 80
Pumping out cellars	32 00
Second-hand manhole frames and covers	6 92
Sewer material	308 96
Laying drains to curbstone	8 12
	$917 48

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of $811 38

As follows:

Second-hand Babcock and Wilcox boilers	$250 00
Miscellaneous work	125 38
Cleaning private connections	63 50
Pumping out cellars	43 50
Second-hand manhole frames and covers	6 92
Sewer material	308 96
Laying drains to curbstone	8 12
	$811 38

HIGHWAYS.

Two permits to open streets were issued during the quarter.

April 2nd, the proposal of I. Capaldi & Company to furnish and deliver on Hillside avenue, about 1400 linear feet of granite curbing for 55 cents per foot, was accepted.

June 1st, the proposal of Booth Brothers and Hurricane Isle Granite Company to furnish and deliver in the city yard 16,000 granite blocks cut 5 to 5½ inches deep, for the sum of $1.44 per square yard, was accepted.

During the quarter, the proposal of the Connecticut Trap Rock Quarries, to furnish and deliver in the city yard 2,100 tons of crushed stone at $1.25 per ton, was accepted.

June 16th, the following proposals for furnishing the coal required for one year from July 1, 1908, were accepted, viz.:

Seaconnet Coal Company, for New River run of mine, or lump	$3.75 per net ton, taken at their yard.
Eastern Coal Company, for Georges Creek run of mine	4.10 " " " " " "
John R. White & Son, Inc., for anthracite	5.85 " " " " " "

June 27th, the proposal of Booth Brothers and Hurricane Isle Granite Company to furnish and deliver in the city yard 50,000 granite blocks of the regular specifications, for $1.47½ per square yard, was accepted.

June 29th, a statement of the cost of concreting sidewalks in sundry streets, with ten per centum added to cover the cost of assessing and collecting, was certified to the assessors of taxes, aggregating the sum of $1,314.64.

During the quarter, the following work was completed:

SIDEWALKS CURBED AND GUTTERS PAVED.

Date of order.	
January 16, 1908,	*Hillside avenue, from North Main street about 700 feet easterly.*

The following work was in progress June 30, 1908:

SIDEWALKS CURBED AND GUTTERS PAVED.

Date of order.	
January 16, 1908,	*Fairmount avenue, from Mount Pleasant to Leah street.*
May 21, 1908,	*Baxter street, from Saratoga to Reynolds avenue.*
" " "	*Baxter street, from Potter avenue to Norwich.*

The following work, ordered by the board of aldermen and city council, had not commenced June 30, 1908, namely:

SIDEWALKS CURBED AND GUTTERS PAVED.

Date of order.			
Jan.	16,	1908,	*Leah street, from Atwells avenue to north line of Fairmount avenue.*
"	"	"	*Clarence street, from Webster avenue to Priscilla.*
May	21,	"	*Alton street, from Regent avenue to Wisdom.*
"	"	"	*Wisdom avenue, from Academy to Alton street.*
"	"	"	*Pelham street, from Manton avenue to Aleppo street.*
"	"	"	*Curtis street, from Bosworth to Pelham.*
"	"	"	*Boylston avenue, from Montague street to Olney.*
"	"	"	*President avenue, from Wayland to Cole.*
"	"	"	*Molloy street, from Rowan to Academy avenue.*
June	18,	"	*Hathaway street, north side, from Elmwood avenue to its westerly termination.*
"	"	"	*Wyatt street, from Plain to Eddy.*

Bills approved on account of highways from April 1 to June 30, 1908, inclusive, amounted to:

Regular appropriation.....	$92,998 90

Charged as follows:

Cleaning streets.....	$24,392 18
Repairs on unpaved streets.....	20,261 86
Crushed stone—material and labor.....	15,798 62
Repairs on paved streets.....	14,039 98
Amount carried forward.....	$74,492 64

Amount brought forward	$74,492 64	
Barn expenses	2,803 18	
Blacksmith and wheelwright shop	2,607 02	
Repairs on stone crushers	1,798 37	
Stone — paving and crosswalk	1,787 01	
Watering streets	1,728 32	
Steam rollers—repairs and supplies	1,120 94	
Tools, implements, etc	971 38	
Labor on material	667 55	
Superintendent's salary	442 00	
Repairs on buildings, highway yard	412 22	
Sundries	327 06	
Horses, wagons, harnesses, etc	248 90	
Building driveways, etc	234 46	
Watchman at city yard	182 00	
Screening gravel	175 85	
Office expenses, city yard	121 26	
Removing snow and ice	39 00	
Fencing streets—material and labor	26 41	
Car fares	15 00	
Telephone lines	5 60	
		$90,206 17

New Work—Building and Rebuilding Streets, Etc.

Sidewalks Curbed and Gutters Paved.

Baxter street, from Potter avenue to Norwich	$278 65	
Baxter street, from Saratoga to Reynolds avenue	35 73	
Fairmount avenue, from Mount Pleasant to Leah street	387 72	
Hillside avenue, from North Main street about 700 feet easterly	2,090 63	2,792 73
		$92,998 90

Bills deposited with the city treasurer for collection from April 1 to June 30, 1908, inclusive, amounted to $7,679 44

As follows:

Labor and material	$5,971 81
Blacksmith and harness work for other departments	875 88
Boarding horses for other departments	333 10
Street sweepings	176 59
Building driveways, etc	173 16
Manure from barn	76 00
Use of steam roller	67 50
Empty oil barrels	5 40
	$7,679 44

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of $4,150 83

As follows:

Labor and material	$2,672 89
Blacksmith and harness work for other departments	586 40
Boarding horses for other departments	333 10
Street sweepings	226 59
Building driveways, etc	182 95
Manure from barn	76 00
Use of steam roller	67 50
Empty oil barrels	5 40
	$4,150 83

SIDEWALKS AND CURBING.

Bills approved on account of sidewalks and curbing from April 1 to June 30, 1908, inclusive, amounted to $8,273 44

Charged as follows:

Granite curbing	$5,754 71
Concreting sidewalks	1,406 47
Repairing sidewalks and gutters	1,112 26
	$8,273 44

Bills deposited with the city treasurer for collection from April 1 to June 30, 1908, inclusive, amounted to . . . $317 19

As follows:

Granite curbing	$270 73
Repairing sidewalks and gutters	46 46
	$317 19

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of $3,620 41

As follows:

Curbing bills	$3,324 97
Granite curbing	248 98
Repairing sidewalks and gutters	46 46
	$3,620 41

CITY ENGINEER.

Bills approved on account of the city engineer's department from April 1 to June 30, 1908, inclusive, amounted to . $10,612 49

Charged as follows:

Salary — city engineer	$1,125 00
Salaries of assistants	7,834 10
Salaries of clerks	894 40
Car fares	403 10
Supplies, drawing material, etc.	297 71
Telephone lines	39 93
Sundries	12 30
Meteorological instruments and repairs	3 00
Instruments and repairs	2 95
	$10,612 49

Bills deposited with the city treasurer for collection from April 1 to June 30, 1908, inclusive, amounted to $42 00

As follows:

Sale of one transit and tripod	$40 00
One blue print of water distribution	2 00
	$42 00

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of $42 00

Bills deposited with the city treasurer for collection from April 1 to June 30, 1908, inclusive, amounted to $30 00

As follows:

Sale of lamp posts	$18 00
Removing gas posts	12 00
	$30 00

During the quarter, coupons from bills collected have been returned by the city treasurer, and receipted for the amount of $30 00

As follows:

Sale of lamp posts	$18 00
Removing gas posts	12 00
	$30 00

PUBLIC WORKS OFFICE.

Bills approved on account of the public works office from April 1 to June 30, 1908, inclusive, amounted to $5,376 24

Charged as follows:

Salaries of commissioner and secretary	$1,925 00
Salaries of office assistants	3,248 46
Office supplies	183 23
Telephone lines	19 55
	$5,376 24

CONTINGENCIES.

June 22nd, the proposal of the Providence Ice Company, to furnish and deliver the ice required by the several drinking fountains during the season commencing July 1, 1908, at $2.25 per net ton, was accepted.

WALTER F. SLADE,

Commissioner.

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As follows:

Sale of lamp posts	$18 00	
Removing gas posts	12 00	
	$30 00	

During the quarter, coupons from bills collected have been returned by the city treasurer, and receipted for the amount of $30 00

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WALTER F. SLADE,
Commissioner.

1908.] CITY DOCUMENT. [No. 22.

ONE HUNDRED AND THIRD

QUARTERLY REPORT

OF THE

Department of Public Works

OF THE

CITY OF PROVIDENCE, R. I.

QUARTER ENDING SEPTEMBER 30, 1908.

The Providence Press:
SNOW & FARNHAM CO., CITY PRINTERS,
63 Washington Street.
1908.

191917

REPORT.

OFFICE OF THE DEPARTMENT OF PUBLIC WORKS,
CITY HALL, PROVIDENCE, R. I., Oct. 1, 1908.

TO THE HONORABLE THE CITY COUNCIL:

In compliance with the requirements of Chapter 41 of the ordinances, the Commissioner of Public Works respectfully presents the one hundred and third quarterly report of the expenditures by the several departments under his direction and control, with statements of work ordered and the condition and cost of same, for the quarter ending September 30, 1908.

WATER WORKS.

July 8th, the proposal of the Providence Steel and Iron Company to furnish at their shop 1,820 steel plate covers for the sand filtration plant for the sum of $2,800 was accepted.

July 11th, the proposal of L. Vaughn Company to furnish and deliver at the sand filtration plant, Pettaconset, 42 pairs of doors, 14 single doors, 42 large door frames, 7 small door frames, 14 sash, 42 bolsters and 84 blocks, for the sum of $1,718, was accepted.

August 4th, the proposal of the Eastern Coal Company to furnish and deliver at Hope station about 650 tons of No. 2 Scranton buckwheat coal for $3.00 per net ton, was accepted

August 27th, the proposal of the General Fire Extinguisher Company to furnish connections for the Manning boiler at Hope Station for the sum of $349.00 was accepted.

The average daily consumption of water during the last quarter was 15,938,351 gallons.

Water pipes were laid during the quarter as follows:

16-INCH.	
In Branch avenue	96.66 feet.
12-INCH.	
In Bridge, Burnside, Link and South Water streets	3,537.02 feet.
8-INCH.	
In Byfield, Edith, Hugo, Leland, Link, Pike, South Water and Tockwotton streets; in President and Reservoir avenues; in Pontiac avenue in town of Cranston	2,248.96 feet.
6-INCH.	
In Golemba lane; Husted court; Bowdoin, Broom, Clematis, Eighth, Hale, Hereford, Manomet, Molloy, Sayles, Stadden and Waller streets; Cole, Elmgrove, Lenox, Lorraine, Slater and Union avenues; in Brook, Garden, Orchard and Queen streets; Bay View and Old Oak avenues in the town of Cranston	3,908.13 feet.
Total	9,790.77 feet.

or 1.854 + miles.

Water pipes were removed or abandoned during the quarter as follows:

12-INCH.	
From Branch avenue	89.00 feet.
6-INCH.	
From Burnside, Edith, (old) Leland, Link and South Water streets	3,441.49 feet.
Total	3,530.49 feet.

or .668 + mile.

Statement of sizes and lengths of pipe laid since the commencement of the work:

42-inch	25,630.70 feet.
36-inch	10,208.82 feet.
30-inch	61,410.07 feet.
24-inch	46,228.46 feet.
20-inch	9,626.59 feet.
16-inch	46,970.87 feet.
12-inch	127,487.43 feet.
10-inch	15,062.78 feet.
8-inch	315,113.34 feet.
6-inch	1,297,016.09 feet.
Total	1,954,755.15 feet.

or 370.218 + miles.

Statement of sizes and lengths of pipe laid for the special water service for fire protection since the commencement of the work:

24-inch	4,299.44 feet.
16-inch	35,053.98 feet.
12-inch	5,422.25 feet.
Total	44,775.67 feet.

or 8.480 + miles.

Seven fire hydrants have been set during the quarter, one in each of the following locations:

Arthur avenue, east side, opposite south line of Europe street.
Dean street, east side, about 173 feet south of West Exchange street.
Hugo street, north side, 357 feet west of Douglas avenue.
Molloy street, north side, 3 feet east of Rowan street.
Penn street, north side, 216 feet east of Knight street.
Waller street, east side, on range of south line of Manomet street.
Wellington street, east side, on south line of East Beacon street.

The total number of fire hydrants, exclusive of those for special service for fire protection, is now two thousand one hundred and sixty-five — two thousand and twenty-one flush, and one hundred and forty-four post.

The total number of fire hydrants on the special water service for fire protection is one hundred and twenty-four.

During the quarter, two hundred and fifty-four water meters were set, of which number forty-six were to replace other meters. The use of nine meters was discontinued.

The following meters were in use at the close of the quarter:

Kind.	Size.									Total.
	⅝-in.	¾-in.	1-in.	1½-in.	2-in.	3-in.	4-in.	6-in.	8-in.	
Ball & Fitts	1,469	305	69	8	2	.....	.....	.....	.....	1,853
Ball & Fitts, rotary	.....	.....	1	.....	.....	.....	1	.....	.....	2
Crown	10,016	1,371	405	184	57	35	33	1	.....	12,102
Empire	2,022	222	93	61	15	1	1	.....	.....	2,415
Fales, Jenks & Sons	.....	.....	1	.....	.....	.....	.....	.....	.....	1
Gem	.....	.....	.....	.....	19	37	20	5	.....	81
Hersey	59	.....	.....	.....	.....	.....	.....	.....	.....	59
Nash	570	.....	.....	.....	.....	.....	.....	.....	.....	570
Thomson	5,131	421	74	53	20	7	7	1	.....	5,714
Trident	102	.....	1	.....	.....	.....	.....	.....	.....	103
Venturi	.....	.....	.....	.....	.....	.....	.....	.....	1	1
Worthington	76	.....	.....	.....	.....	.....	.....	.....	.....	76
	19,445	2,319	644	306	113	80	62	7	1	22,977

Seven plumber's licenses were issued during the quarter, making the total number one hundred and thirty-seven, all of which expire December 31, 1908.

Seven hundred and thirty-eight permits to do plumbing work were issued during the quarter.

One hundred and eighty-seven applications for water were made during the quarter, making the total number twenty-nine thousand one hundred and forty-six.

The number of new service stops opened during the quarter was one hundred and eighty-nine.

The total number of service stops opened to September 30, 1908, inclusive, was twenty-eight thousand four hundred forty-eight. The number in actual use September 30, 1908, was twenty-six thousand two hundred and fifty-one.

The amount of bills approved on account of water works from July 1, to September 30, 1908, inclusive, was:

For maintenance $135,412 75

Classified as follows:

PETTACONSET PUMPING STATION.

Coal and wood	$6,611 32	
Firemen	947 73	
Sundries	761 56	
Engineers	658 29	
Superintendence	456 57	
Allis-Chalmers high-duty engine	223 57	
Oil, waste and packing	167 84	
Cornish engine house	147 79	
Care of grounds	145 11	
Labor on fuel	117 71	
Repairs on boilers	109 02	
Lights	67 35	
Barn expenses	64 00	
Horses, wagons, harnesses, etc	3 74	
Real estate	34	
		$10,481 94

SAND FILTRATION PLANT.

Installation	$72,411 25	
Cleaning beds	2,321 34	
Labor and supplies pumping	1,922 53	
Laboratory, labor and supplies	491 40	
Miscelloneous supplies,	158 56	
		77,305 08

SOCKANOSSET RESERVOIR.

Watchman	$188 00	
Sundries	31 71	
		219 71
Amount carried forward		$88,006 73

Amount brought forward		$88,006 73

Hope Pumping Station.

New engine and boiler, to furnish and erect	$2,327 25	
Coal and wood	1,825 75	
Sundries	872 11	
Engineers	615 07	
Firemen	477 09	
Lights	41 38	
Holly pumping engine	10 14	
		6,168 79

Hope Reservoir.

Sundries	$7,872 10	
Watchman	211 50	
		8,083 60

Fruit Hill Reservoir.

Sundries	$581 93	
Watchman	188 00	
		769 93

Meter Department.

Water meters	$3,312 76	
Setting and repairing meters	1,604 50	
		4,917 26

Pipe Line and Service Stops.

Repairs	$4,050 83	
Salaries of assistant engineers	2,140 09	
Inspection of pipe line and services,	1,230 44	
Superintendence — salaries	942 82	
		8,364 18

Pipe Yard

Laying water pipe	$7,779 56	
Leading main from Sockanosset to city — to lay	2,415 59	
Laying service pipe	1,990 08	
Special castings	1,617 10	
Stop valves	677 70	
Tools	510 50	
Labor on and carting pipe	216 60	
Special water service for fire protection	105 88	
Fire hydrants, boxes and covers	67 79	
Pipe yard, office expenses	12 19	
Repairs on pipe yard buildings	8 26	
Cast iron water pipe	3 36	
Taps and stops	1 79	
		15,406 40
Amount carried forward		$131,716 89

Amount brought forward		$131,716 89

MISCELLANEOUS.

Clerks' and inspectors' salaries	$1,837 69	
Barn expenses	949 44	
Prevention of defilement of the Pawtuxet	300 00	
Horses, wagons, harnesses, etc	248 18	
Telephone lines	153 93	
Analyses of water	84 00	
Car fares	75 00	
Real estate in Lincoln	28 75	
Public drinking fountains and troughs	9 49	
Sundries	9 38	
		3,695 86
		$135,412 75

The total expenditures to September 30, 1908, inclusive, was $11,646,223 57

The *net* expenditure for maintenance from July 1, to September 30, 1908, inclusive, was	$127,576 09
The *net* expenditure for maintenance to September 30, 1908, inclusive, was	3,827,056 63

The value of the water works system January 1, 1908, as estimated by the city engineer, was as follows:

Pettaconset pumping station	$340,694 00	
Hope pumping station	115,027 44	
Sockanosset, Hope and Fruit Hill reservoirs	676,466 10	
Main lines and distribution pipes	2,829,997 52	
Real estate in Pawtuxet and Lincoln	15,975 00	
Tools and supplies	56,527 86	
		$4,034,687 92

Bills deposited with the city treasurer for collection from July 1 to September 30, 1908, inclusive, amounted to . . . $84,909 51

As follows:

Water	$77,099 98
Water meters	4,350 25
Setting and repairing meters	2,212 70
Amount carried forward	$83,662 93

Amount brought forward	$83,662 93	
Labor and material, laying services, etc	1,031 98	
Rent of real estate	100 50	
Sale of hay at Sockanosset reservoir	40 00	
Penalties	32 00	
Repairs on pipe line	24 40	
Permanently closing service stops	15 00	
Empty oil barrels	2 70	
		$84,909 1

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of $83,467 1

As follows:

Water	$75,598 53	
Water meters	4,189 95	
Setting and repairing meters	1,909 60	
Labor and material, laying services, etc	1,525 80	
Rent of real estate	100 50	
Repairs on pipe line	53 11	
Sale of hay at Sockanosset reservoir	40 00	
Penalties	32 00	
Permanently closing service stops	15 00	
Empty oil barrels	2 70	
		$83,467 19

The amount of bills approved on account of water works for the fiscal year ending September 30, 1908, inclusive, was:

For maintenance $422,953 70

Classified as follows:

PETTACONSET PUMPING STATION.

Coal and wood	$23,711 05
Firemen	3,687 98
Sundries	2,964 09
Engineers	2,422 27
Superintendence	1,777 71
Care of grounds	729 14
Oil, waste and packing	643 72
Allis-Chalmers high-duty engine	472 65
Amount carried forward	$36,408 61

Amount brought forward	$36,408 61	
Repairs on boilers	392 38	
Labor on fuel	316 79	
Barn expenses	308 86	
Cornish engine house	274 27	
Lights	144 50	
Real estate	126 30	
Horses, wagons, harnesses, etc.	54 82	
Corliss pumping engine and house	39 05	
Worthington high-duty engine	27 72	
Cornish pumping engine	3 00	
		$38,096 30

SAND FILTRATION PLANT.

Installation	$171,148 30	
Cleaning beds	11,503 37	
Labor and supplies, pumping	7,580 03	
Laboratory — labor and supplies	2,063 72	
Miscellaneous supplies	805 30	
		193,100 72

SOCKANOSSET RESERVOIR.

Watchman	$732 00	
Sundries	563 01	
		1,295 01

HOPE PUMPING STATION.

New engine and boiler, to furnish and erect	$3,714 91	
Coal and wood	2,311 37	
Engineers	1,915 78	
Firemen	1,722 91	
Sundries	1,464 68	
Lights	234 00	
Holly pumping engine	84 05	
Repairs on boilers	32 64	
Oil, waste and packing	7 61	
		11,487 95

HOPE RESERVOIR.

Sundries	$11,192 02	
Watchman	823 50	
		12,015 52

FRUIT HILL RESERVOIR.

Sundries	$2,044 56	
Watchman	732 00	
		2,776 56
Amount carried forward		$258,772 06

Amount brought forward		$258,772 06
Meter Department.		
Setting and repairing meters	$7,573 20	
Water meters	7,172 97	
		14,746 17
Pipe Line and Service Stops.		
Repairs	$16,928 09	
Salaries of assistant engineers	7,585 67	
Inspection of pipe line and services	7,494 15	
Superintendence — salaries	3,670 98	
		35,678 89
Pipe Yard.		
Laying water pipe	$21,303 93	
Cast iron water pipe	19,192 67	
Fire hydrants, boxes and covers	9,897 54	
Laying service pipe	6,805 32	
Special water service for fire protection	6,634 16	
Special castings	5,902 60	
Service pipe	3,289 55	
Tools	2,839 26	
Leading main from Sockanosset to city — to lay	2,638 74	
Stop valves	2,569 56	
Pig lead and tin	1,862 88	
Taps and stops	1,578 12	
Labor on and carting pipe	1,235 93	
Leak in Washington street main	360 00	
Pipe yard office expenses	210 60	
Thawing out water pipe	164 99	
Repairs on pipe yard buildings	97 16	
		86,583 01
Miscellaneous.		
Town of Cranston tax	$9,616 62	
Clerks' and inspectors' salaries	7,071 21	
Barn expenses	3,559 77	
Town of Warwick tax	2,760 45	
Prevention of defilement of the Pawtuxet	1,200 00	
Horses, wagons, harnesses, etc	913 62	
Telephone lines	616 14	
Car fares	600 00	
Town of North Providence tax	400 00	
Sundries	203 48	
Public drinking fountains and troughs	118 53	
Analyses of water	84 00	
Real estate in Lincoln	28 75	
Inspection of water pipe with reference to electrolysis	1 00	
		27,173 57
		$422,953 70

SEWERS.

During the quarter ending September 30, 1908, three hundred and seventy-seven permits were issued to drain-layers — two hundred and fourteen for new work and one hundred and sixty-three for extensions and repairs of drains.

Seven drain-layer's licenses were issued during the quarter, making the total number one hundred and fifty, all of which expire December 31, 1908.

During the quarter, contracts for the construction of sewers were awarded to the following parties and subsequently executed, namely:

[The amounts given below are what are estimated will be paid the contractors for labor, and do not include the cost of inspection and materials.]

To Charles Crankshaw.

No. of resolution.	Date of approval.		
296.	July 3, 1908,	*Niagara street, from Fifield avenue to Sackett street, and in right of way from Niagara street south to section 6 of the improved sewerage system,*	$9,905 40

To Frederick E. Shaw.

295.	July 3, 1908,	*Congdon street, from a point 280 feet south of Jenckes to end of sewer in Congdon street 20 feet north of Jenckes,* . .	$4,070 00
298.	" " "	*Morris avenue, from Cypress street to Savoy,* .	$6,479 00

No. of resolution.	Date of approval.		
365.	Sept. 19, 1908,	*Hanover street, from near Elmwood avenue to Bucklin street,* . . .	$694 70
366.	" " "	*Hope street, from a point 200 feet southerly of Cypress street to Larch, and from about 50 feet north of Larch to Savoy; also in Savoy street, from Hope to Morris avenue,* .	$8,860 00
367.	" " "	*Larch street, from a point 75 feet west of Ivy to Camp, and from near Ivy easterly to Morris avenue,*	$7,035 50

To Albert Brule.

368.	Sept. 19, 1908,	*Ormsbee avenue, from angle at railroad to Lock street,*	$424 80

August 10th, the proposal of James C. Goff Company to furnish and deliver on the city wharf one cargo of Sanford bricks at $8.75 per M., was accepted.

During the quarter, the construction of the following sewers was completed, namely:

No. of resolution.	Date of approval.		Date of completion.
254.	July 2, 1907,	*Elmgrove avenue, from Sessions street to Savoy, and in Savoy, from Elmgrove avenue to Morris,*	July 6, 1908

No. of resolution.	Date of approval.		Date of completion
421.	Nov. 9, 1907,	*Dodge street, from the northerly line of Bridgham street school estate to Westminster street,* .	July 9, 1908
425.	" " "	*Corliss street, from Cross to West River,* .	Aug. 12, 1908
141.	April 17, 1908,	*Curtis street, from Bosworth to Pelham, in Pelham street, from Manton avenue to Aleppo street, and in Aleppo street, from Pelham about 300 feet easterly to storm sewer,*	July 21, 1908
142.	" " "	*Greeley street, from near Charles to Opper, and in Opper street, from Greeley to Branch avenue,* . . .	July 23, 1908
143.	" " "	*Boylston avenue, from Olney street to Montague,*	July 30, 1908
144.	" " "	*Wisdom avenue, from near Academy to Alton street, and in Alton street, from Wisdom avenue to Regent,* .	Aug. 8, 1908
145.	" " "	*President avenue, from Cole to present end of sewer about 40 feet west of Wayland,* . .	Sept. 1, 1908

Work upon the following sewers was in progress at the close of the quarter, namely:

No. of resolution.	Date of approval.	
295.	July 3, 1908,	*Congdon street, from a point 280 feet south of Jenckes to end of sewer in Congdon street 20 feet north of Jenckes.*
296.	" " "	*Niagara street, from Fifield avenue to Sackett street, and in right of way from Niagara south to section 6 of the improved sewerage system.*
298.	" " "	*Morris avenue, from Cypress street to Savoy.*

Work upon the following sewers, completing the work ordered by the city council, had not commenced September 30, 1908, namely:

No. of resolution.	Date of approval.	
365.	Sept. 19, 1908,	*Hanover street, from near Elmwood avenue to Bucklin street.*
366.	" " "	*Hope street, from a point 200 feet southerly of Cypress to Larch, and from about 50 feet north of Larch street to Savoy; also in Savoy street, from Hope to Morris avenue.*
367.	" " "	*Larch street, from a point 75 feet west of Ivy to Camp and from near Ivy easterly to Morris avenue.*
368.	" " "	*Ormsbee avenue, from angle at railroad to Lock street.*

The amount of bills approved on account of sewers from July 1 to September 30, 1908, inclusive, was:

For construction, ... $31,836 77

Charged as follows:

Material	$3,776 73
Sundries	1,368 89
Additional catch-basins	1,264 02
Testing cement	302 85
Tools	74 96
Building wharf for residue disposal at sewage precipitation tanks	1,123 56
Sewer in Academy avenue, from near Chalkstone to Molloy street	8 97
Sewer in Alverson avenue, from present end to Plainfield street	459 02
Sewer in Blackstone boulevard, east and west sides	7 65
Sewer in Boylston avenue, from Olney street to Montague	2,000 21
Sewer in Clarence street, from near Webster avenue to Priscilla	7 65
Sewer in Congdon street, from a point 280 feet south of Jenckes to end of sewer north of Jenckes	1,540 46
Sewer in Corliss street, from Cross to West River	1,345 29
Sewer in Curtis, Pelham and Aleppo streets	1,130 50
Sewer in Dodge street, from the northerly line of Bridgham street school estate to Westminster street	235 14
Sewer in Eaton street, from summit at Roslyn to Douglas avenue	56 61
Sewer in Fairmount avenue and Leah street	20 20
Sewer in Greeley and Opper streets	1,268 63
Sewer in Langdon street, from Hagan to Branch avenue	1,072 06
Sewer in Lowell avenue, from Plainfield street to Hartford avenue	1,219 98
Sewer in Morris avenue, from Cypress street to Savoy	3,353 76
Sewer in Niagara street and in right of way	6,271 48
Sewer in President avenue, from Cole to present end of sewer near Wayland avenue	2,471 83
Sewer in Wisdom avenue and Alton street	1,456 32
	$31,836 77

For maintenance, ... $37,533 15

Classified as follows:

Cleaning basins and sewers	$7,197 74
Repairing basins and sewers	3,845 72
Sundries	3,692 38
Cleaning and repairing old drains	1,126 81
Inspection of connections	748 86
Amount carried forward	$16,611 51

Amount brought forward	$16,611 51
Tools	697 71
Barn expenses	621 94
Salary, superintendent	456 57
Horses, wagons, harnesses, etc	161 34
Office expenses	96 24
Telephone lines	41 18
Carpenter shop	35 51
Cleaning private connections	28 17
Filling cisterns, etc	5 60

ERNEST STREET STATION.

Coal and wood	1,696 03
Repairs on boilers	1,419 18
Engineers	907 72
Cleaning screens	720 87
Firemen	656 59
Cleaning and repairing pumps	578 93
Care of grounds	196 62
Supplies	155 46
Repairs on engines	34 53
Repairs on buildings	25 52
Care of buildings	24 64
Lights	23 01

SEWAGE PRECIPITATION TANKS.

Chemicals	5,880 00
Labor in sludge disposal	4,256 66
Labor on sewage precipitation	1,521 19
Electrical power	519 35
Repairs on machinery	97 42
Miscellaneous supplies	49 05
Lights	8 08
Repairs on buildings	4 13
Repairs on tanks	2 50
	$37,533 15

The *net* expenditure for construction of sewers to September 30, 1908, inclusive, was $8,148,081 67

The *net* expenditure for maintenance of sewers to September 30, 1908, inclusive, was ..... $1,613,616 5[illegible]

Bills deposited with the city treasurer for collection from July 1 to September 30, 1908, inclusive, amounted to . . . $5,030 1[illegible]

As follows:

Miscellaneous work	$3,699 85
Cleaning private connections	79 50
Electrical power furnished at carpenter shop	19 56
Pumping out cellars	18 95
Sewer material	1,212 26
	$5,030 12

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of . $5,141 46

As follows:

Miscellaneous work	$3,770 70
Cleaning private connections	90 75
Electrical power furnished at carpenter shop	48 80
Pumping out cellars	18 95
Sewer material	1,212 26
	$5,141 46

The amount of bills approved on account of sewers for the fiscal year ending September 30, 1908, inclusive, was as follows:

For construction, ... $168,987 21

Charged as follows:

Material	$19,860 30
Additional catch-basins	3,360 14
Sundries	2,866 27
Contract reservations	1,827 00
Testing cement	1,171 03
Tools	143 48
Building wharf for residue disposal at sewage precipitation tanks	17,543 58
Sewer in Academy avenue, from near Chalkstone to Molloy street	616 89
Sewer in Academy avenue and Molloy street	28,208 34
Sewer in Academy avenue, from Smith street to Whitford avenue	12,513 55
Sewer in Alverson avenue, from present end to Plainfield street	1,079 21
Amount carried forward	$89,189 79

Amount brought forward	$89,189 79
Sewer in Anthony avenue, from Avon street to Cranston	4 08
Sewer in Berkley street, from near Harold to River avenue	100 57
Sewer in Blackstone boulevard, east and west sides	1,852 84
Sewer in Boylston avenue, from Olney street to Montague	2,915 71
Sewer in Clarence street, from near Webster avenue to Priscilla	466 37
Sewer in Congdon street, from a point 280 feet south of Jenckes to end of sewer north of Jenckes	1,540 46
Sewer in Curtis, Pelham and Aleppo streets	1,921 72
Sewer in Corliss street, from Cross to West River	1,345 29
Sewer in Dodge street, from the northerly line of Bridgham street school estate to Westminster street	737 60
Sewer in Eaton street, from summit at Roslyn to Douglas avenue	14,276 36
Sewer in Elmgrove avenue and Savoy street	13,193 76
Sewer in Elmhurst avenue and Smith street	8,891 18
Sewer in Fairmount avenue and Leah street	2,060 92
Sewer in Greeley and Opper streets	1,591 72
Sewer in Hillside avenue, from summit in Hillside to North Main street	2,856 96
Sewer in Langdon street, from Hagan to Branch avenue	3,080 71
Sewer in Laurel avenue, from Lorraine street to Blackstone boulevard	993 75
Sewer in Lowell avenue, from Plainfield street to Hartford avenue	3,673 06
Sewer in Montague and Greenwood streets	5 10
Sewer in Morris avenue, from Cypress street to Savoy	3,353 76
Sewer in Niagara street and in right of way	6,271 48
Sewer in Plainfield street, from near Lowell avenue to Laurel Hill	4 81
Sewer in President avenue, from Cole to present end of sewer near Wayland	2,471 83
Sewer in Progress avenue, from Webster to Whitehall street	4 82
Sewer in Sterling and Terrace avenues and Magnolia street	2,318 02
Sewer in Tell street, from near Vinton to Courtland	9 18
Sewer in West River street and in right of way	2,399 04
Sewer in Wisdom avenue and Alton street	1,456 32
	$168,987 21

For maintenance, ... $132,647 06

Classified as follows:

Cleaning basins and sewers	$27,068 29
Repairing basins and sewers	14,666 63
Sundries	7,698 04
Cleaning and repairing old drains	4,345 17
Inspection of connections	2,851 78
Tools	2,512 57
Barn expenses	2,215 38
Salary, superintendent	1,777 71
Horses, wagons, harnesses, etc	1,092 87
Use of water	300 00
Office expenses	287 81
Telephone lines	170 18
Cleaning private connections	141 41
Carpenter shop	107 85
Removing snow and ice from inlets	89 98
Repairs on gate houses	69 15
Car fares	40 00
Repairs on buildings, sewer maintenance yard	39 19
Filling cisterns, etc	23 25

ERNEST STREET STATION.

Coal and wood	8,465 74
Engineers	3,482 94
Cleaning screens	2,708 12
Firemen	2,534 15
Cleaning and repairing pumps	2,502 30
Repairs on boilers	2,279 18
Repairs on engines	969 26
Care of grounds	762 94
Supplies	445 22
Repairs on buildings	170 30
Care of buildings	102 74
Lights	94 11

SEWAGE PRECIPITATION TANKS.

Chemicals	18,580 88
Labor in sludge disposal	11,923 74
Labor on sewage precipitation	5,539 65
Miscellaneous supplies	3,192 02
Electrical power	1,843 00
Repairs on machinery	486 74
Repairs on buildings	387 29
Experimental treatment of sludge	369 66
Care of grounds	107 44
Fuel	95 28
Lights	57 36
Repairs on tanks	49 74
	$132,647 06

HIGHWAYS.

July 23d, a schedule of unpaid curbing bills amounting to $11,735.63 was certified to the assessors of taxes for collection.

During the quarter, the following proposals were accepted for furnishing and delivering at the city yard granite blocks cut 6 to 7 inches deep for the sum of $1.44 per square yard, viz.:

John Catto,	not to exceed	10,000	blocks.
Smith Granite Company,	" " "	25,000	"
New England Granite Works,	" " "	10,000	"
Booth Brothers and Hurricane Isle Granite Company,	" " "	75,000	"

During the quarter, the following work was completed:

Sidewalks Curbed and Gutters Paved.

Date of order.	
January 16, 1908,	*Leah street, from Atwells avenue to north line of Fairmount avenue.*
" " "	*Fairmount avenue, from Mount Pleasant to Leah street.*
" " "	*Clarence street, from Webster avenue to Priscilla.*
May 21, "	*Alton street, from Regent avenue to Wisdom.*
" " "	*Wisdom avenue, from Academy to Alton street.*
" " "	*Pelham street, from Manton avenue to Aleppo street.*
" " "	*Curtis street, from Bosworth to Pelham.*
" " "	*Baxter street, from Saratoga to Reynolds avenue.*
" " "	*Baxter street, from Potter avenue to Norwich.*

Date of order.			
June	18,	1908,	*Hathaway street, north side, from Elmwood avenue to its westerly termination.*
"	"	"	*Wyatt street, from Plain to Eddy.*

The following work was in progress September 30, 1908:

SIDEWALKS CURBED AND GUTTERS PAVED.

Date of order.			
May	21,	1908,	*Boylston avenue, from Montague street to Olney.*
"	"	"	*President avenue, from Wayland to Cole.*

The following work, ordered by the board of aldermen and city council, had not commenced September 30, 1908, namely:

SIDEWALKS CURBED AND GUTTERS PAVED.

Date of order.			
May	21,	1908,	*Molloy street, from Rowan to Academy avenue.*

Bills approved on account of highways from July 1 to September 30, 1908, inclusive, amounted to:

Regular appropriation		$123,162

Classified as follows:

Repairs on unpaved streets	$30,070 23
Cleaning streets	25,156 90
Repairs on paved streets	13,696 35
Crushed stone — material and labor	13,565 43
Stone — paving and crosswalk	11,508 46
Barn expenses	3,936 32
Blacksmith and wheelwright shop	2,428 35
Watering streets	1,893 32
Amount carried forward	$102,255 36

Amount brought forward	$102,255 36	
Labor on material	893 01	
Tools, implements, etc	890 96	
Steam rollers—repairs and supplies	810 21	
Horses, wagons, harnesses, etc	469 45	
Superintendent's salary	461 43	
Repairs on stone crushers	403 11	
Building driveways, etc	209 67	
Watchman at city yard	190 00	
Sundries	140 65	
Fencing streets—material and labor	134 15	
Office expenses, city yard	82 08	
Repairs on buildings, highway yard	35 85	
Car fares	15 00	
Telephone lines	5 60	
		$106,996 53

New Work—Building and Rebuilding Streets, Etc.

Sidewalks Curbed and Gutters Paved.

Alton street, from Regent avenue to Wisdom	$1,624 02	
Baxter street, from Potter avenue to Norwich	232 54	
Baxter street, from Saratoga to Reynolds avenue	222 52	
Boylston avenue, from Montague street to Olney	1,841 72	
Clarence street, from Webster avenue to Priscilla	1,001 22	
Curtis street, from Bosworth to Pelham	1,790 57	
Fairmount avenue, from Mount Pleasant to Leah street	1,875 38	
Hathaway street, north side, from Elmwood avenue to its westerly termination	1,681 69	
Leah street, from Atwells avenue to north line of Fairmount	990 04	
Molloy street, from Rowan to Academy avenue	219 64	
Pelham street, from Manton avenue to Aleppo street	1,317 42	
President avenue, from Wayland to Cole	102 02	
Wisdom avenue, from Academy to Alton street	2,414 07	
Wyatt street, from Plain to Eddy	853 16	
		16,166 01
		$123,162 54

Bills deposited with the city treasurer for collection from July 1 to September 30, 1908, inclusive, amounted to . . . $9,553 63

As follows:

Labor and material	$7,978 09
Blacksmith and harness work for other departments	654 01
Boarding horses for other departments	491 08
Building driveways, etc	134 95
Street sweepings	115 00
One horse sold to the forestry department	100 00
Manure from barn	76 00
Empty oil barrels	4 50
	$9,553 63

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of $12,490 90

As follows:

Labor and material	$11,207 98
Blacksmith and harness work for other departments	873 88
Building driveways, etc	115 54
Street sweepings	111 00
One horse sold to the forestry department	100 00
Manure from barn	76 00
Empty oil barrels	4 50
	$12,490 90

Bills approved on account of highways for the fiscal year ending September 30, 1908, inclusive, amounted to:

Regular appropriation	$401,477 36	
Special appropriation	16,130 02	
		$417,607 38

Classified as follows:

Cleaning streets	$76,084 88
Repairs on unpaved streets	70,298 09
Crushed stone—material and labor	60,804 65
Repairs on paved streets	33,148 22
Amount carried forward	$240,335 84

Amount brought forward	$240,335 84	
Stone — paving and crosswalk	29,444 01	
Barn expenses	13,056 38	
Blacksmith and wheelwright shop	10,695 24	
Screening gravel	9,366 79	
Steam rollers — repairs and supplies	5,027 60	
Labor and material	4,780 48	
Removing snow and ice	4,662 89	
Watering streets	4,137 08	
Tools, implements, etc	4,049 20	
Repairs on stone crushers	3,013 40	
Horses, wagons, harnesses, etc	2,267 74	
Superintendent's salary	1,782 57	
Building driveways, etc	1,556 57	
Repairs on buildings, highway yard	781 53	
Watchman at city yard	734 00	
Sundries	698 63	
Office expenses, city yard	385 59	
Fencing streets — material and labor	366 15	
Car fares	100 00	
Telephone lines	22 40	
		$337,264 09

New Work—Building and Rebuilding Streets, Etc.

Sidewalks Curbed and Gutters Paved.

Alton street, from Regent avenue to Wisdom	$1,624 02	
Baxter street, from Potter avenue to Norwich	511 19	
Baxter street, from Saratoga to Reynolds avenue	258 25	
Berkley street, from River avenue to Harold street	1,010 07	
Boylston avenue, from Montague street to Olney	1,841 72	
Clarence street, from Webster avenue to Priscilla	1,001 22	
Curtis street, from Bosworth to Pelham	1,790 57	
Fairmount avenue, from Mount Pleasant to Leah street	2,263 10	
Hamilton street, from Adelaide avenue to Lenox	625 66	
Hathaway street, north side, from Elmwood avenue to its westerly termination	1,681 69	
Hillside avenue, from North Main street about 700 feet easterly	2,090 63	
Leah street, from Atwells avenue to north line of Fairmount	990 04	
Molloy street, from Rowan to Academy avenue	219 64	
Pelham street, from Manton avenue to Aleppo street	1,317 42	
Pemberton street, from Dover to Beaufort	661 73	
President avenue, from Wayland to Cole	102 02	
Sterling avenue, from Laurel Hill to Webster	3,808 80	
Amounts carried forward	$21,797 77	$337,264 09

Amounts brought forward	$21,797 77	$337,264 09
Tell street, from Vinton to Courtland	1,945 47	
Terrace avenue, from Laurel Hill to the city line	6,042 01	
Union avenue, from Pocasset to Silver Lake	8 50	
Wisdom avenue, from Academy to Alton street	2,414 07	
Wyatt street, from Plain to Eddy	853 16	
		33,060 98

Rebuild with Warren Brothers Bitulithic Pavement.

Angell street, from Prospect to Wayland avenue	$28,109 54	
Waterman street, from Prospect to Cooke	3,042 75	
		31,152 29

Lay Out, Extend, Widen and Improve.

Allens avenue and Eddy street	16,130 02
	$417,607 38

SIDEWALKS AND CURBING.

Bills approved on account of sidewalks and curbing from July 1 to September 30, 1908, inclusive, amounted to . . . $6,212 95

Charged as follows:

Granite curbing	$3,997 85
Concrete sidewalks	1,260 53
Repairing sidewalks and gutters	954 57
	$6,212 95

Bills deposited with the city treasurer for collection (for granite curbing), from July 1 to September 30, 1908, inclusive, amounted to $185 50

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of $841 32

As follows:

Curbing bills	$728 37
Granite curbing	112 95
	$841 32

Bills approved on account of sidewalks and curbing for the fiscal year ending September 30, 1908, inclusive, amounted to . $17,295 87

Charged as follows:

Granite curbing	$10,129 19
Concreting sidewalks	4,379 84
Repairing sidewalks and gutters	2,786 84
	$17,295 87

CITY ENGINEER.

August 7th, the proposal of the Library Bureau to furnish and install a card index in the office of the city engineer for the approximate snm of $1,183.58 was accepted.

Bills approved on account of the city engineer's department from July 1 to September 30, 1908, inclusive, amounted to . $11,765 17

Charged as follows:

Salary—city engineer	$1,125 00
Salaries of assistants	8,395 75
Salaries of clerks	923 89
Installation of card index	890 81
Car fares	202 60
Supplies, drawing material, etc	179 89
Telephone lines	34 08
Instruments and repairs	9 50
Sundries	3 65
	$11,765 17

Bills approved on account of the city Engineer's department for the fiscal year ending September 30, 1908, inclusive, amounted to $42,728 73

Charged as follows:

Salary — city engineer	$4,500 00
Salaries of assistants	31,891 07
Salaries of clerks	3,597 27
Installation of card index	890 81
Supplies, drawing material, etc	849 75
Car fares	811 55
Telephone lines	138 50
Sundries	25 80
Instruments and repairs	18 48
Meteorological instruments and repairs	5 50
	$42,728 73

BRIDGES.

Bills approved on account of bridges from July 1 to September 30, 1908, inclusive, amounted to $12,914 63

Charged as follows:

Barn expenses	$135 58
Branch avenue bridge — to rebuild	7,961 45
Building at city yard	38
Charles street railroad bridge	10 44
Crawford street bridge	112 10
Delaine street bridge	1 62
Francis street bridge	5 81
Hawkins street bridge	14 80
Horses, wagons, harnesses, etc	20 83
Lumber, hardware, etc	27 58
Manton bridge	13 14
Manton avenue bridge	6 80
Mill street bridge	19 00
Nash lane bridge	2 76
Point street bridge	173 80
Amount carried forward	$8,506 09

Amount brought forward	$8,506 09	
Post office bridge	1 90	
Randall street bridge	75 26	
Red bridge	1,247 79	
Rent of keeper's house—Washington bridge	36 00	
Salaries—Point street bridge	1,156 25	
Salaries—Red bridge	605 68	
Salaries—Washington bridge	607 28	
Sundries	82 34	
Telephone lines	2 68	
Tools	117 52	
Washington bridge	211 06	
West River street bridge	3 44	
Weybosset bridge	253 94	
Whelden street bridge	7 40	
	$12,914 63	

Bills deposited with the city treasurer for collection (for old lumber), from July 1 to September 30, 1908, inclusive, amounted to $11 25

During the quarter, coupons from bills collected (for old lumber), have been returned by the city treasurer and receipted for to the amount of $11 25

Bills approved on account of bridges for the fiscal year ending September 30, 1908, inclusive, amounted to $34,000 53

Charged as follows:

Acorn street bridge	$239 69
Atwells avenue bridge	170 72
Barn expenses	513 67
Branch avenue bridge	23 49
Branch avenue bridge - to rebuild	9,034 91
Building at city yard	16 75
Car fares	50 00
Charles street railroad bridge	50 54
Crawford street bridge	1,801 36
Delaine street bridge	440 40
Eagle street bridge	74 78
Francis street bridge	79 87
Gaspee street bridge	16 75
Amount carried forward	$12,512 93

Amount brought forward	$12,512 93
'a bridge	35 62
ins street bridge	34 71
s, wagons, harnesses, etc	126 56
er, hardware, etc	1,038 04
›n bridge	156 02
›n avenue bridge	49 42
o bridge	103 42
treet bridge	111 64
lane bridge	2 76
›street bridge	2 01
street bridge	1,326 80
ffice bridge	6 56
›nade street bridge	20 36
›ll street bridge	75 98
ridge	2,689 04
›f keeper's house — Washington bridge	144 00
es — Point street bridge	4,348 50
es — Red bridge	2,319 82
es — Washington bridge	2,347 72
street bridge	3 58
field avenue bridge	3 58
'ies	733 70
hone lines	16 72
	552 02
e street bridge	1 79
kuck bridge	6 23
ington bridge	4,897 75
ington row bridge	22 63
River street bridge	6 81
osset bridge	282 52
len street bridge	27 29
	$34,000 53

PUBLIC LIGHTS.

lls approved on account of the public
s from July 1 to September 30, 1908,
sive, amounted to $70,344 35

ıarged as follows:

ghts	$50,202 33
descent lights	13,681 41
ach lights	6,190 71
ies	249 60
g and removing gas-posts	20 30
	$70,344 35

Bills deposited with the city treasurer for collection from July 1 to September 30, 1908, inclusive, amounted to . . . $37 05

As follows:

Common lanterns and frames	$24 00	
Removing gas posts	12 00	
Sale of two copies of Illuminating Engineer	1 05	
	$37 05	

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of $37 05

As follows:

Common lanters and frames	$24 00	
Removing gas posts	12 00	
Sale of two copies of Illuminating Engineer	1 05	
	$37 05	

Bills approved on account of the public lights for the fiscal year ending September 30, 1908, inclusive, amounted to . . $279,884 90

Charged as follows:

Arc lights	$199,631 07	
Incandescent lights	54,216 95	
Welsbach lights	24,765 40	
Salaries	978 86	
Sundries	250 67	
Setting and removing gas posts	41 95	
	$279,884 90	

PUBLIC WORKS OFFICE.

Bills approved on account of the public works office from July 1 to September 30, 1908, inclusive, amounted to . . . $5,496 18

ed as follows:

commissioner and secretary	$1,925 00
office assistants	3,299 04
lies	250 86
lines	19 55
ire	1 73
	$5,496 18

pproved on account of the public fice for the fiscal year ending Sep- 0, 1908, inclusive, amounted to . $22,259 42

ed as follows:

commissioner and secretary	$7,700 00
office assistants	13,604 21
lies	874 87
lines	78 61
ire	1 73
	$22,259 42

FORESTRY.

pproved on account of the forestry ent from July 1 to September 30, clusive, amounted to: . . . $2,588 48

ed as follows:

ty forester	$348 00
repairing and removing trees and	963 46
gons, harnesses etc	844 95
supplies	344 65
f building at city yard	177 26
rees and shrubs	133 28
nses	76 88
	$2,588 48

Bills deposited with the city treasurer for collection (for removing a tree), from July 1 to September 30, 1908, inclusive, amounted to $15 0

During the quarter, coupons from bills collected (for removing a tree), have been returned by the city treasurer and receipted for to the amount of $15 0

Bills approved on account of the forestry department for the fiscal year ending September 30, 1908, inclusive, amounted to . $2,753 36

Charged as follows:

Salary of city forester	$348 00
Trimming, repairing and removing trees and shrubs	963 46
Horses, wagons, harnesses, etc	544 95
Tools and supplies	509 53
Erection of building at city yard	177 26
Spraying trees and shrubs	133 2[illegible]
Barn expenses	76 88
	$2,753 36

WALTER F. SLADE,
Commissioner.

1909.] CITY DOCUMENT. [No. 4.

ONE HUNDRED AND FOURTH

QUARTERLY REPORT

OF THE

Department of Public Works

OF THE

CITY OF PROVIDENCE, R. I.

QUARTER ENDING DECEMBER 31, 1908.

The Providence Press:
Snow & Farnham Co., City Printers.
63 Washington Street.
1909.

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TILDEN FOUNDATIONS.
1909

REPORT.

OFFICE OF THE DEPARTMENT OF PUBLIC WORKS,
CITY HALL, PROVIDENCE, R. I., Jan. 2, 1909.

TO THE HONORABLE THE CITY COUNCIL:

In compliance with the requirements of Chapter 41 of the ordinances, the Commissioner of Public Works respectfully presents the one hundred and fourth quarterly report of the expenditures by the several departments under his direction and control, with statements of work ordered and the condition and cost of same, for the quarter ending December 31, 1908.

WATER WORKS.

October 7th, the proposal of the Ludlow Valve Manufacturing Company to furnish and deliver in the city yard 10 Ludlow post hydrants at $55.00 each and 10 six inch No. 1 bronze mounted gates for same at $11.00 each, was accepted.

November 27th, the proposal of the Putnam Foundry and Machine Company to furnish and install in the keeper's house at Fruit Hill reservoir a steam heating apparatus, in accordance with specifications, for the sum of $350.00, was accepted.

December 29th, the proposal of John W. Lyon to furnish the taps, stops and plugs required during the current year was accepted and a contract subsequently executed. Amount $1,420.30.

The proposal of the Fuller Iron Works to furnish the special castings required during the ensuing year was accepted and a contract executed. Estimated amount, $2,543.49.

The average daily consumption of water during the last quarter was 15,438,605 gallons, and the average daily consumption for the year 1908 was 15,554,541 gallons.

Water pipes were laid during the quarter as follows:

12-INCH.	
In Burnside street	743.60 feet.
8-INCH.	
In Admiral street, Allens and Montgomery avenues; and in Narragansett boulevard, in the town of Cranston	1,453.59 feet.
6-INCH.	
In Meni and Weiss courts; Cumberland, Cornwall, Elma, Frederick, Hereford, Jillson, Maynard, Promenade, Raphael, Rowley, Saratoga, Seventh, Stadden, Sybaris and Tell streets; Atlanta, Carolina, Georgia, Montgomery, New York, Progress and Tennessee avenues; in Chiswick road; Moreland and Montgomery avenues in the town of Cranston; and in Sack street in the town of North Providence	6,041.79 feet.
Total	8,238.98 feet.

or 1.560+miles.

Water pipes were removed or abandoned during the quarter as follows:

8-INCH.	
From Acorn street	36.92 feet.
6-INCH.	
From Burnside street and Reynolds avenue	729.33 feet.
Total	766.25 feet.

or .145+mile.

Statement of sizes and lengths of pipe laid since the commencement of the work:

42-inch	25,630.70 feet.
36-inch	10,208.82 feet.
30-inch	61,410.07 feet.
24-inch	46,228.46 feet.
20-inch	9,626.59 feet.
16-inch	46,970.87 feet.
12-inch	128,231.03 feet.
10-inch	15,062.78 feet.
8-inch	316,530.01 feet.
6-inch	1,302,328.55 feet.
Total	1,962,227.88 feet.

or 371.634 + miles.

Statement of sizes and lengths of pipe laid for the special water service for fire protection since the commencement of the work:

24-inch	4,299.44 feet.
16-inch	35,053.98 feet.
12-inch	5,422.25 feet.
Total	44,775.67 feet.

or 8.480 + miles.

Nine fire hydrants have been set during the quarter, one in each of the following locations:

Cornwall street, northeast side, 289 feet southeast of Hawkins.
Montgomery avenue, north side, 221 feet west of Virginia.
N. Y., N. H. & H. R. R. Co's. yard, between tracks 51 and 53, 625 feet west of Kinsley avenue.
N. Y., N. H. & H. R. R. Co's. yard, between tracks 35 and 37, 789 feet west of Kinsley avenue.
Promenade street, north side, 149 feet west of Steeple.
Public street, north side, 339 feet east of Eddy.
Sisson street, east side, 44 feet north of Maynard.
Terrace avenue, west side, 2.5 feet south of Shafter street.
Tell street, north side, 7.5 feet east of Ridge.

The total number of fire hydrants, exclusive of those for special service for fire protection, is now two thousand one hundred and seventy-four — two thousand and thirty flush, and one hundred and forty-four post.

The total number of fire hydrants on the special water service for fire protection is one hundred and twenty-four.

During the quarter, two hundred and sixty-six water meters were set, of which number fifty-nine were to replace other meters. The use of four meters was discontinued.

The following meters were in use at the close of the quarter:

Kind.	Size.									Total.
	⅝-in.	¾-in.	1-in.	1¼-in.	2-in.	3-in.	4-in.	6-in.	8-in.	
Ball & Fitts	1,429	294	67	8	2	.....	.....	.....	.....	1,800
Ball & Fitts, rotary	.....	.....	1	.....	.....	.....	1	.....	.....	2
Crown	10,036	1,393	408	185	58	35	34	1	.....	12,150
Empire	2,129	226	95	61	15	1	1	.....	.....	2,528
Fales, Jenks & Sons	.....	.....	1	.....	.....	.....	.....	.....	.....	1
Gem	.....	.....	.....	.....	19	37	21	5	.....	82
Hersey	59	.....	.....	.....	.....	.....	.....	1	.....	60
Nash	600	.....	.....	.....	.....	.....	.....	.....	.....	600
Thomson	5,152	421	74	53	20	7	7	1	.....	5,735
Trident	102	.....	1	.....	.....	.....	.....	.....	.....	103
Venturi	.....	.....	.....	.....	.....	.....	.....	.....	1	1
Worthington	118	.....	.....	.....	.....	.....	.....	.....	.....	118
	19,625	2,334	647	307	114	80	64	8	1	23,180

Four plumber's licenses were issued during the quarter, making the total number one hundred and forty-one, all of which expired December 31, 1908.

Seven hundred and thirty-five permits to do plumbing work were issued during the quarter.

Two hundred and twelve applications for water were made during the quarter, making the total number twenty-nine thousand three hundred and fifty-eight.

The number of new service stops opened during the quarter was two hundred.

The total number of service stops opened to December 31, 1908, inclusive, was twenty-eight thousand six hundred and forty-eight. The number in actual use December 31, 1908, was twenty-six thousand three hundred and twenty-one.

The following is a list of street sprinklers ready for use on the Providence water works, viz. :

Aborn street, near junction of Atwells avenue.
America street, near Atwells avenue.
Barton street, corner of Broadway.
Blackstone boulevard, east side, 25 feet south of Margrave avenue.
Bradford street, near Broadway.
Branch avenue, near junction of North Main street.
Benefit street, foot of Angell.
Benefit street, between North Main and Halsey.
Beacon avenue, near Friendship street.
Broad street, near Gallup.
Broadway, north side, west of Harris avenue.
Camp street, between Cypress and Larch.
Codding street, near Westminster.
Cranston street, east side of railroad bridge.
Crary street, between Eddy and Hospital.
Gromwell street, near Dexter.
Daniel avenue, near Plainfield street.
Dexter street, opposite Division.
Doyle avenue, near Hope street.
Doyle avenue, near North Main street.
Doyle avenue, north side, 16 feet east of Camp street.
Exchange place, west end.
Ford street, west of Cranston.
Garnet street, near Pine.
Governor street, near Waterman.
Greenwich street, corner Elmwood avenue.
Harris avenue, near Atwells.
Hope street, junction of Thayer.
Hope street, corner of Wickenden.
John street, corner of Benefit.
Knight street, corner of Grove.
Laurel Hill avenue, near Plainfield street.
Linden street, near Broad.
Manning street, near Brook.
Medway street, east of Wayland avenue.
Melrose street, near south corner of burying ground.
Moore street, corner of Broad.

Morris avenue, east side, 393 feet north of Olney street.
North Main street, corner of Thomas.
North Main street, near Mill.
Olive street, east of Prospect.
Olney street, near Camp.
Orms street, near Ormsbee avenue.
Oxford street, corner of Eddy.
Pocasset avenue, near Plainfield street.
Power street, west of Hope.
Promenade street, west of Gaspee.
Promenade street, west of Holden.
Promenade street, west of Steeple.
Prospect street, corner of Bowen.
Public street, about 200 feet east of Temple.
Reservoir avenue, opposite Atlantic.
Roger Williams park, near Broad street, (private).
Salem street, between Potter avenue and Benedict street.
Smith street, near Oakland avenue.
Smith street, near Schaffer.
Smithfield avenue, north of Branch.
Smithfield avenue, north of the Moshassuck river.
Transit street, between South Water and South Main.
Traverse street, corner of Pike.
Washington street, corner of Dean.
Webster avenue, north of Progress.
West Friendship street, near Broad.
Weybosset street, opposite Abbott Park place.
Willard avenue, west of Prairie.
Willow street, west of Messer.
Winter street, near Pond.
Woodland street, near Holden.

The following is a list of sprinkler hydrants for car sprinklers, namely:

Angell street, south side, 90 feet east of Wayland avenue, in sidewalk.
Bassett street, northwest side, 105½ feet southwest of Hoppin.
Branch avenue, south side, 316 feet west of Woodward road, in sidewalk.
Camp street, east side, 125 feet north of Olney, in sidewalk.
Chalkstone avenue, northeast corner of Fallon, in sidewalk.
Dexter street, west side, 18 feet south of Cranston, in sidewalk.
Earl street, south side, 71½ feet east of Bucklin.
Eddy street, west side, at Richmond, in street.
Eddy street, east side, 9½ feet south of south line of Calla, in sidewalk.
Edna street, west side, 16 feet north of south line of car house.
Elmwood avenue, east side, 85 feet south of Thackeray street.
Federal street, north side, 19 feet east of Corey, in sidewalk.
Hope street, east side, 125 feet north of Barnes, in street.
Hope street, east side, 64 feet south of Methyl, in street.
Hope street, west side, 175 feet south of south line of Cypress, in sidewalk.

Manton avenue, west side, 150 feet south of fire station, in sidewalk.
Market square, north side, 24 feet east of Canal street, in street.
North Main street, west side, 182 feet north of White, in street.
North Main street, west side, 17 feet north of Livingstone, in street.
Orms street, south side, 23 feet east of Windsor, in sidewalk.
Pike street, south side, 105 feet west of Brook, in sidewalk.
Randall square, east side, 32 feet north of Randall street, in street.
Richmond street, southwest side, 44 feet southeast of Pine, in sidewalk.
Silver Spring street, north side, 61 feet east of Charles.
Smith street, southwest side, 360 feet southeast of Hilltop avenue, in sidewalk.
Thurbers avenue, south side, 208 feet east of Broad street, in sidewalk.
Winter street, east side, 187 feet south of Pond, in sidewalk.

The following is a list of drinking troughs supplied with water by the Providence water works, viz.:

Academy avenue, north of Chalkstone.
Allen's avenue junction of Eddy street.
Angell street, junction of South Angell.
Atwells avenue, junction of Harris.
Bassett street, off Hospital.
Branch avenue and Abbott street.
Broad street, junction of Eddy.
Broadway, junction of Westminster street.
Canal street, near Linard.
Charles street, corner of Ormsbee avenue.
Charles street and Branch avenue.
Chalkstone avenue, junction of Manton.
Dexter street, near Durfee.
Dorrance street, near Exchange place.
Douglas and Chalkstone avenues.
Douglas avenue and Admiral street.
Dyer street, near Crawford street bridge.
Dyer street, junction of Eddy.
Elmwood avenue and Public street.
Federal street, junction of Kenyon.
Fountain street, junction of Carpenter.
Hartford avenue, junction of Killingly street.
Manton avenue, junction of Atwells.
Miller avenue (Roger Williams park).
North Main street, junction of Benefit.
Olneyville square.
Plainfield street, junction of Pocasset avenue.
Prairie avenue, junction of Broad street.
Point street, junction of Friendship.
Point street, near the bridge.
Potters avenue, corner of Cranston street.
Randall square.
Reservoir avenue, junction of Pontiac street.

Rochambeau avenue, east of Blackstone boulevard.
Smith street, junction of Chalkstone avenue.
South Main street, junction of Wickenden.
Thayer street, junction of Hope.
Trinity square.
Waterman street, corner of East River.
Westminster street, junction of Cranston.
Weybosset street, near Mathewson.
Wickenden street, corner of Governor.

TOWN OF CRANSTON.

Cranston street, junction of Phenix road.
Park avenue, corner of Doric.

TOWN OF JOHNSTON.

Manton avenue, near Killey.

The following is a list of the locations of the public drinking fountains of the city, viz.:

Atwells avenue, corner of Academy.
Atwells avenue, at Franklin square.
Branch avenue, at Charles street.
Benefit street, corner of College.
Canal street, corner of Steeple.
Candace street, corner of Orms.
Davis park.
Dexter street, opposite Division.
Dorrance street, near Exchange place.
Dyer street, corner of Crawford.
Friendship street, at Hayward park.
Jackson street, corner of Westminster.
North Main street, corner of Star.
Olneyville square.
Point street, corner of Eddy.
Potters avenue, corner of Elmwood.
Randall Square.
Roger Williams park, near Betsey Williams cottage.
Roger Williams park, near Elmwood avenue.
Roger Williams park, near the menagerie.
Ship street, corner of Dyer.
Tockwotton park.
Westminster street, corner of Dyer.
Westminster street, junction of Cranston.
Wickenden street, corner of Transit.

The following table shows the lengths, sizes, etc., of services laid during the year ending December 31, 1908:

Months.	Length of Services in Feet.							Number and Size of Taps Used.					Number and Size of Stops Used.					Service Boxes Used.
	Size of Pipe.				Totals.	Total Length of Trenching.	Total Length of Paving.											
	⅝ inch.	¾ inch.	1 inch.	1¼ inch.				½ in.	⅝ in.	¾ in.	1 in.	Total.	½ in.	⅝ in.	¾ in.	1 in.	Total.	
January	163.1	.....	.....	.....	163.1	171.5	15.5	10	....	....	....	10	10	....	....	....	10	10
February	24.2	.....	.....	.....	24.2	25.0	3.0	1	....	....	....	1	1	....	....	....	1	1
March	648.9	28.4	.....	.....	677.3	710.5	98.0	39	2	...	...	41	39	2	....	....	41	41
April	1,076.6	8.2	20.2	9.0	1,114.0	1,167.0	141.0	62	1	1	1	65	63	1	1	1	66	66
May	861.4	175.2	8.2	.....	1,044.8	1,097.0	142.0	49	9	2	....	60	55	7	1	....	63	66
June	1,287.6	33.4	.....	7.0	1,328.0	1,394.0	142.0	69	6	1	1	77	77	2	....	1	80	85
July	529.8	8.2	.....	.....	538.0	570.0	101.0	37	1	....	....	38	38	1	....	....	39	39
August	844.4	105.6	20.2	17.2	987.4	1,038.0	168.0	52	8	1	1	62	53	8	1	1	63	63
September	1,148.2	87.4	13.2	.....	1,248.8	1,310.0	100.0	59	7	4	2	72	67	7	1	....	75	80
October	850.8	82.0	7.0	26.2	966.0	1,025.0	101.0	62	5	1	2	70	65	5	1	1	72	74
November	991.0	67.3	28.4	.....	1,086.7	1,143.5	93.5	59	5	2	2	68	65	4	2	....	71	74
December	889.8	107.4	8.2	.....	1,005.4	1,057.0	156.5	51	7	2	1	61	55	7	1	....	63	65
Totals	9,315.8	703.1	105.4	59.4	10,183.7	10,708.5	1,261.5	550	51	14	10	625	588	44	8	4	644	664

The following table shows the lengths, sizes, etc., of services laid during thirty-two years ending December 31, 1908.

YEAR.	Length of Services in Feet.									Taps Used.						Stops Used.						Service boxes used.
	Sizes of Pipe.						Totals.	Trenching.	Paving.													
	½ inch.	⅝ inch.	¾ inch.	1 inch.	1¼ inch.	1½ inch.				⅜ in.	½ in.	⅝ in.	¾ in.	1 in.	Totals.	⅜ in.	½ in.	⅝ in.	¾ in.	1 in.	Totals.	
To Dec. 31, 1907.....	9919.9	274,129.98	24,987.09	5,501.2	4,215.6	457.7	319,211.47	335,730.79	40,576.78	612	16,452	1,898	490	388	19,840	645	17,535	1,575	341	323	20,419	21,006
1908.....	.....	9,315.80	703.10	105.4	59.4	.....	10,183.70	10,708.50	1,261.50	...	550	51	14	10	625	....	588	44	8	4	644	664
Totals...	9,919.9	283,445.78	25,690.19	5,606.6	4,275.0	457.7	329,395.17	346,439.29	41,838.28	612	17,002	1,949	504	398	20,465	645	18,123	1,619	349	327	21,063	21,670

Changes in size and location of services in 1908:

Taps and Stops.										Sizes and Lengths of Lead Pipe.											Trenching.	Paving.	Change in size only.	Change in location only.	Change in both size and location	Relaid.
Taken Out.					Inserted.					Taken Out.						Inserted.										
⅜ inch.	½ inch.	⅝ inch.	¾ inch.	1 inch.	⅜ inch.	½ inch.	⅝ inch.	¾ inch	1 inch	½ inch.	⅝ inch.	¾ inch.	1 inch.	1¼ inch	1½ inch.	⅝ inch.	¾ inch.	1 inch.	1¼ inch.	1½ inch.						
34	31	6	1	2		35	16	4	10	460.9	679.1	100.0	8.2	30.9		431.5	333.8	71.9	160.3		1,582.0	555.0	52	6	4	1

12 services have been removed.
During the year 80 taps were dug up and examined.
78 were cleaned and 2 were found unobstructed.
18 private taps were inserted.

The following table exhibits the number of service stops opened each month from the commencement to December 31, 1908.

Months.	1871.	1872.	1873.	1874.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1889.	1890.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.
January....	..	54	33	21	34	55	15	49	9	20	7	17	15	21	17	18	26	7	39	36	39	56	40	29	30	27	30	40	18	24	18	27	26	19	24	26	28	21
February...	..	47	18	18	7	25	23	18	9	19	3	11	9	10	7	15	7	10	21	25	26	23	24	28	8	28	24	21	7	15	10	18	26	12	11	26	16	12
March.....	..	38	34	63	7	45	32	60	19	46	23	39	11	28	9	24	16	14	19	28	24	28	36	40	27	20	42	46	28	30	24	39	35	12	20	40	22	31
April.....	..	109	109	108	32	108	82	78	52	58	55	49	55	62	48	68	60	38	61	53	73	76	71	76	67	100	70	53	69	47	73	73	60	58	60	57	50	47
May.....	..	224	206	147	162	168	136	95	80	84	66	72	78	62	62	61	70	52	74	66	114	83	91	81	79	98	82	51	73	60	67	52	70	76	80	71	78	62
June.....	..	329	295	151	172	148	114	103	71	109	82	48	64	81	81	59	50	86	59	80	83	103	106	105	100	76	86	61	73	60	96	71	58	67	75	68	72	96
July.....	..	333	261	127	141	158	83	80	49	75	56	77	66	76	77	83	62	89	74	67	85	105	93	80	89	83	59	51	66	44	81	74	59	80	73	45	73	51
August.....	..	224	209	123	83	94	91	51	51	39	58	87	69	61	57	71	49	52	56	76	95	104	115	116	83	64	69	54	80	66	78	62	57	52	75	65	83	56
September..	..	184	147	139	101	94	80	63	44	37	60	67	93	50	70	59	74	63	64	77	93	114	88	112	70	71	67	53	53	76	72	56	72	61	56	71	51	82
October.....	..	138	135	160	92	84	81	78	79	48	61	56	47	65	62	52	80	70	64	54	104	102	96	85	90	70	62	47	54	65	66	43	58	66	64	77	74	64
November..	..	100	104	185	86	54	73	57	63	54	37	64	49	51	39	57	69	47	58	72	81	118	80	70	68	52	54	42	45	54	63	55	48	58	60	66	70	73
December...	56	83	45	122	60	35	55	45	47	29	40	27	56	44	46	28	49	42	53	50	83	102	62	62	57	58	53	47	40	56	44	46	43	51	48	40	41	63
Totals.....	56	1863	1596	1364	977	1068	865	777	573	618	548	614	612	611	575	595	612	570	642	684	900	1014	902	884	708	747	698	566	606	507	692	616	612	612	646	652	658	658

The receipts for water each year since the commencement have been as follows:

Year.	Amount.	Year.	Amount.
1872	$41,003 51	1891	$404,553 84
1873	97,386 09	1892	409,421 21
1874	132,052 39	1893	427,546 51
1875	165,144 71	1894	432,383 97
1876	183,868 73	1895	471,069 97
1877	200,039 39	1896	485,187 33
1878	218,883 33	1897	490,652 47
1879	229,551 78	1898	502,603 10
1880	247,705 06	1899	522,124 46
1881	260,530 87	1900	554,949 62
1882	269,318 77	1901	578,869 07
1883	283,632 89	1902	605,307 35
1884	302,368 36	1903	621,016 74
1885	313,561 21	1904	670,700 90
1886	323,084 67	1905	673,252 97
1887	339,513 60	1906	691,459 12
1888	346,731 58	1907	741,487 03
1889	377,497 97	1908	717,752 39
1890	401,140 86		

The amount of bills approved on account of water works from October 1, to December 31, 1908, inclusive, was:

For maintenance, ... $120,768 91

Classified as follows:

PETTACONSET PUMPING STATION.

Coal and wood	$7,060 26
Firemen	875 70
Sundries	847 31
Engineers	612 06
Superintendence	461 43
Oil, waste and packing	229 40
Amount carried forward	$10,086 16

Amount brought forward	$10,086 16	
Care of grounds	178 71	
Barn expenses	157 02	
Repairs on boilers	144 03	
Labor on fuel	77 28	
Allis-Chalmers high-duty engine	66 77	
Cornish engine house	24 06	
Horses, wagons, harnesses, etc	7 57	
Real estate	4 20	
Lights	1 48	
		$10,747 21

SAND FILTRATION PLANT.

Installation	$57,061 61	
Labor and supplies, pumping	2,475 88	
Cleaning beds	2,214 14	
Laboratory — labor and supplies	554 78	
Miscellaneous supplies	302 40	
		62,608 81

SOCKANOSSET RESERVOIR.

Sundries	$432 16	
Watchman	190 00	
		622 16

HOPE PUMPING STATION.

Engineers	$668 93	
New engine and boiler, to furnish and erect	623 17	
Sundries	532 18	
Firemen	391 50	
Coal and wood	2[illegible]6 [illegible]9	
Repairs on boilers	140 43	
Lights	67 64	
Oil, waste and packing	48 05	
		2,768 89

HOPE RESERVOIR.

Sundries	$956 08	
Watchman	213 75	
		1,169 83

FRUIT HILL RESERVOIR.

Sundries	$894 00	
Watchman	190 00	
		1,084 00

METER DEPARTMENT.

Water meters	$4,671 81	
Setting and repairing meters	1,777 69	
		6,449 50
Amount carried forward		$84,450 47

Amount brought forward		$85,450 47
Pipe Line and Service Stops.		
Repairs	$3,969 96	
Salaries of assistant engineers	2,165 76	
Inspection of pipe line and services,	2,036 65	
Superintendence — salaries	952 85	
		9,125 22
Pipe Yard.		
Laying water pipe	$7,824 77	
Laying service pipe	1,796 73	
Fire hydrants, boxes and covers	556 01	
Special water service for fire protection	553 75	
Special castings	553 17	
Tools	296 21	
Labor on and carting pipe	183 20	
Pig lead and tin	171 26	
Stop valves	106 89	
Pipe yard, office expenses	88 90	
Cast iron water pipe	32 85	
Taps and stops	13 00	
Service pipe	6 75	
Repairs on pipe yard buildings	58	
		12,184 07
Miscellaneous.		
Town of Cranston tax	$9,616 62	
Clerks' and inspectors' salaries	1,857 26	
Barn expenses	647 01	
Inspection of water pipe with reference to electrolysis	600 84	
Town of North Providence tax	400 00	
Prevention of defilement of the Pawtuxet	300 00	
Telephone lines	153 93	
Car fares	150 00	
Public drinking fountains and troughs	139 49	
Horses, wagons, harnesses, etc	126 48	
Analysis of water	17 14	
Sundries	38	
		14,009 15
		$120,768 91

The total expenditures to December 31, 1908, inclusive, was $11,766,992 48

The *net* expenditure for maintenance from October 1 to December 31, 1908, inclusive, was $107,819 09

The *net* expenditure for maintenance to December 31, 1908, inclusive, was $3,934,875 72

The value of the water works system January 1, 1908, as estimated by the city engineer, was as follows:

Pettaconset pumping station	$340,694 00	
Hope pumping station	115,027 44	
Sockanosset, Hope and Fruit Hill reservoirs	676,466 10	
Main lines and distribution pipes	2,829,997 52	
Real estate in Pawtuxet and Lincoln	15,975 00	
Tools and supplies	56,527 86	
		$4,034,687 92

Bills deposited with the city treasurer for collection from October 1 to December 31, 1908, inclusive, amounted to . . . $93,482 23

As follows:

Water	$80,833 85	
Labor and material, laying services, etc	5,539 27	
Water meters	4,701 50	
Setting and repairing meters	2,197 92	
Rent of real estate	110 90	
Repairs on pipe line	46 59	
Penalties	40 00	
Empty oil barrels	7 20	
Permanently closing service stops	5 00	
		$93,482 23

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of $99,751 23

As follows:

Water	$86,761 41	
Labor and material, laying services, etc	5,681 35	
Water meters	4,794 50	
Setting and repairing meters	2,317 58	
Rent of real estate	100 50	
Repairs on pipe line	43 69	
Penalties	40 00	
Empty oil barrels	7 20	
Permanently closing service stops	5 00	
		$99,751 23

SEWERS.

During the quarter ending December 31, 1908, three hundred and nineteen permits were issued to drain-layers—one hundred and sixty-nine for new work and one hundred and fifty for extensions and repairs of drains.

Four drain-layer's licenses were issued during the quarter, making the total number one hundred and fifty-four, all of which expired December 31, 1908.

October 7th, the proposal of the Warner-Miller Company, to furnish and deliver in the city yard 500 pieces of 15-inch sewer pipe, 100 pieces of 15 × 6-inch branches and 225 pieces of 12 × 6-inch branches at 78 $\frac{1}{16}$ % discount from the list price, was accepted.

During the quarter, contracts for the construction of sewers were awarded and subsequently executed, as follows:

[The amounts given below are what are estimated will be paid the contractors for labor, and do not include the cost of inspection and materials.

To Frederick E. Shaw.

No. of resolution.	Date of approval.		
385.	Oct. 6, 1908.	*Hugo street, from the city hospital land to Douglas avenue.* . . .	$[illegible]
403.	" 19, "	*Blackstone boulevard, west side, from Mount avenue to end of present sewer near Upton.* . . .	$1,255 00

November 9th, the proposal of Thomas Jennings to repair the chimney at Ernest street station for a sum not to $650.00 was accepted.

December 29th, the proposal of the Fuller Iron Works to furnish the sewer castings required during the year 1909 was accepted and a contract subsequently executed. Estimated amount, $2,768.40.

SEWERS CONSTRUCTED TO DECEMBER 31, 1908, IN MILES.

ITEMS.	KIND.	Built previous to 1908.	Built during 1908.	Total to Dec. 31, 1908.
Under regular appropriation	Brick.	41.963	982	42.945
Under regular appropriation	Pipe.	138.736	3.566	142.302
Under improved sewerage appropriation.....	Brick and pipe.	28.388	.....	28.388
Total miles of sewers...		209.087	4.548	213.635

During the year, 103 catch-basins, 39 extra inlets, and 212 manholes have been built, making a total in use December 31, 1908, of 5,046 catch-basins, 1,820 extra inlets, and 9,256 manholes.

During the quarter, the construction of the following sewers was completed, namely:

No. of resolution.	Date of approval.		Date of completion.
295.	July 3, 1908,	*Congdon street, from a point 280 feet south of Jenckes to end of sewer in Congdon street 20 feet north of Jenckes.* .	Nov. 28, 1908.
296.	" " "	*Niagara street, from Fifield avenue to Sackett street, and in right of way from Niagara south to section 6 of the improved sewerage system.* .	Dec. 10, 1908.

No. of resolution.	Date of approval.		Date of completion.
298.	July 3, 1908,	*Morris avenue, from Cypress street to Savoy.*	Nov. 2, 1908.
368.	Sept. 19, "	*Ormsbee avenue, from angle at railroad to Lock street.* . . .	Nov. 17, 1908.

Work upon the following sewers was in progress at the close of the quarter, namely:

No. of resolution.	Date of approval.	
366.	Sept. 19, 1908,	*Hope street, from a point 200 feet southerly of Cypress to Larch, and from about 50 feet north of Larch to Savoy; also in Savoy street, from Hope to Morris avenue.*
367.	" " "	*Larch street, from a point 75 feet west of Ivy to Camp, and from near Ivy easterly to Morris avenue.*
385.	Oct. 6, 1908,	*Hugo street, from the city hospital land to Douglas avenue.*
403.	Oct. 19, 1908,	*Blackstone boulevard, west side, from Mount avenue to end of present sewer near Upton.*

Work upon the following sewers, completing the work ordered by the city council, had not commenced December 31, 1908, namely:

No. of resolution	Date of approval.	
365.	Sept. 19, 1908,	*Hanover street, from near Elmwood avenue to Bucklin street.*
476.	Dec. 19, "	*Huron street, from near Wisdom avenue to Regent.*
477.	" " "	*Temple street, from a point about 100 feet north of Potter avenue to Public street.*
478.	" " "	*Union avenue, from a point 300 feet west of Webster to Webster.*

SEWER MAINTENANCE DEPARTMENT.

The following table shows the work performed by the department cleaning sewers, basins and drains for the year 1908.

Months.	Old Work.								New Work.										Total deposit removed, cubic yards.
	Old Drains.			Sand-Catchers.		Open Ditches.			Sumps.		Sewers.				Catch-Basins.				
	Number.	Length in feet.	Deposit removed, cu. yards.	Number.	Deposit removed, cu. yards.	Number.	Length in feet.	Deposit removed, cu. yards.	Number.	Deposit removed, cu. yards.	Number.	Length in feet.	Deposit removed, cu. yards.	Dead Ends.	No. times examined.	Number Cleaned.	Deposit removed, cu. yards.		
January	1	175	6.94	...	...	...	...	...	18	250.74	82	13,260	54.37	...	1	749	1,577.86		1,898.66
February	...	...	...	...	...	...	...	...	19	413.37	45	7,000	173.97	...	1	205	487.40		1,074.74
March	1	375	25.00	...	...	...	...	...	11	270.19	30	9,450	258.44	...	1	610	1,505.82		2,059.45
April	...	...	...	...	...	...	...	...	17	238.74	80	12,400	138.47	18	2	782	1,804.59		2,181.80
May	...	...	...	...	...	...	...	...	21	263.70	34	5,075	243.38	18	1	878	1,758.48		2,265.56
June	...	...	...	...	...	1	475	15.89	11	227.07	57	14,000	38.52	47	1	790	1,705.00		1,986.48
July	...	...	...	9	100.00	...	...	...	13	206.70	26	2,800	37.37	...	1	853	1,980.15		2,324.22
August	...	...	...	...	...	...	...	...	22	265.89	11	...	26.08	...	1	657	1,486.23		1,778.20
September	...	...	...	...	...	1	250	23.59	20	246.78	210	59,850	117.53	197	2	1,022	2,286.67		2,674.57
October	...	...	...	...	...	5	769	41.00	20	248.67	187	68,400	132.57	106	1	1,562	2,345.12		2,767.36
November	...	...	...	...	...	...	...	...	14	210.26	164	59,900	95.12	21	1	673	774.67		1,080.05
December	...	...	...	...	...	1	89	3.00	11	184.48	102	27,100	60.91	37	1	707	1,005.59		1,339.98

Work on Sewers.

Examined one hundred forty-three sewers for condition and deposit, also all gates, slots and sumps fifty-two times, and all storm gauges ten times. Made special examination of three sewers and three cellars. Replaced thirty-six manhole frames and thirty-nine manhole covers, and put eleven storm gauges in manholes. Repaired fourteen sewers, fifty-eight holes over sewers, nine manholes, three gates, eight house connections, eight bulkheads, one sump, and two tanks at precipitation tanks. Reset one hundred twenty-six manhole frames; put in nine branches; flushed six-inch overflow pipe eight times; put new slot in sewer at Valley and Delaine streets; removed deposit from sewer outlet in river on Charles street, and removed roots from one hundred thirty nine sewers.

Work on Basins.

Repaired sixty basins, one hundred ten holes at basins, and thirty-five chutes. Flushed 3,301 chutes and 5,386 traps in basins, thawed out two hundred fifty-four chutes, and removed snow from three hundred ninety inlets. Reset one hundred eighteen traps in basins, put ten extra traps in basins, replaced seven traps, thirty-eight covers and two basin heads.

Old Work.

Removed snow from twelve sidewalks. Pounded and seeded banks at Ernest street pumping station and at precipitation tanks. Covered up deposit at Ernest street pumping station with sand three times. Leveled twenty-two dumps; repaired eleven drains and relaid one drain.

Miscellaneous Work.

Flushed 121 house connections, charged $346.75; pumped out ten cellars, $53.48; removed deposit from basins on Smith street for F. E. Shaw, $12.15; flushed sewer for F. E. Shaw, $9.25; supplied water for Providence Gas. Co., $352.88; altered basins on Parade street for Providence Gas Co., $14.75; pumped out gas tank for J. H. Higgins & Co., $44 35; pumped out gas tanks for O'Connor Bros., $172 36; built sewer for D. & W. Fuse Co., $260.50; altered manholes for Providence Telephone Co., $14.50; altered sewer, basins and manholes for Brown & Sharpe Mfg. Co., $1,692.15; built sewer and manholes in new city hospital grounds, $707.58; filled tank for General Chemical Co., $6.25; use of pump for J. M. Anderson, $3; made connection on Dike street for John Deary, $4.15; pumped out gas tank for John McLean, $20; made connection on West Exchange street for W. N. Chadsey, $35.51.

For Rhode Island Co.: Altered manholes, $257.37; built basins and manhole, $55.75; supplied water, $158.66; cleaned and repaired track grates, $13 50; flushed switch on Dorrance street, $5.66, and flushed connection at car barn, $6.65.

For N. Y., N. H. & H. R. R. Co.: Altered drain, etc. on Blair lane, $72.79; repaired sewer on Ives and East George streets, $624 67; repaired sewer on Manning street, $659 49; altered chutes on Promenade street, $60.34; built basins on Oriental street, $94.49.

For Sewer Construction Department: Built sewer on Spooner street; sewer and basins on Hathaway street; wharf for residue disposal, connection to sewer on Ernest street; three manholes, fourteen basins and twenty-six chutes; abandoned two manholes, one basin, and one chute; altered sewer on Langdon street; manhole on Smith street; manholes on Alton street; manhole on Pelham street; manhole on West River and Corliss streets; manhole on Eaton street; manholes on Lowell avenue and Wyatt street, and basin on Amherst street. Examined new sewers; took soundings at Merino bridge; pumped out manhole and made connection on Priscilla avenue, and connected basins on Exchange place.

For Water Maintenance Department: Pounded and seeded banks at Hope reservoir and Sockanosset reservoir; fired at Hope station; removed ashes from Hope station seven times; removed boilers and ice plant from filtration plant; removed derrick from Fruit Hill reservoir; carted clay from cars to Hope reservoir; carted ashes from cars to Fruit Hill reservoir; cleaned drain at filter beds; repaired leak at Hope reservoir; tested hydrants; built two gate manholes; connected drinking fountain; altered connection of drinking trough; repaired old drain at Budlong farm; reset three water gate manholes; altered manhole on South Water street; flushed three drinking fountain connections; connected six sprinklers with sewer.

For Highway Department: Altered twenty-five manholes.

For Bridge Department: Altered storm sewer and chutes on Branch avenue.

The amount of bills approved on account of sewers from October 1 to December 31, 1908, inclusive, was:

For construction, ... $28,208 38

Charged as follows:

Contract reservations	$3,592 00
Material	2,348 55
Additional catch-basins	897 71
Sundries	738 53
Testing cement	271 15
Tools	15 12
Building wharf for residue disposal at sewage precipitation tanks	63 44
Sewer in Academy avenue, from near Chalkstone to Molloy street	974 43
Sewer in Academy avenue and Molloy street	1,429 61
Sewer in Academy avenue, from Smith street to Whitford avenue	1,283 99
Amount carried forward	$11,614 53

Amount brought forward	$11,614 53
Sewer in Blackstone boulevard, west side, from Mount avenue to end of present sewer near Upton	420 80
Sewer in Congdon street, from a point 280 feet south of Jenckes to end of sewer north of Jenckes	4,052 30
Sewer in Hope, and Savoy streets	811 59
Sewer in Hugo street, from the city hospital land to Douglas avenue	1,599 85
Sewer in Larch street, from 75 feet west of Ivy to Camp, and from near Ivy street to Morris avenue	1,708 39
Sewer in Morris avenue, from Cypress street to Savoy	1,388 60
Sewer in Niagara street, and in right of way	5,937 16
Sewer in Ormsbee avenue, from angle at railroad to Lock street	665 98
Sewer in President avenue, from Cole to present end of sewer about 40 feet west of Wayland	9 18
	$28,208 38

For maintenance, ... $35,479 36

Classified as follows:

Cleaning basins and sewers	$6,887 41
Repairing basins and sewers	3,437 36
Cleaning and repairing old drains	1,316 83
Sundries	1,279 73
Inspection of connections	728 14
Salary, superintendent	461 43
Barn expenses	415 80
Tools	337 48
Horses, wagons, harnesses, etc	322 04
Use of water	300 00
Telephone lines	48 09
Office expenses	40 32
Cleaning private connections	26 50
Carpenter shop	25 76
Car fares	10 00
Repairs on gate houses	8 18
Repairs on buildings, sewer maintenance yard	1 65
ERNEST STREET STATION.	
Repairs on buildings	2,725 92
Coal and wood	1,982 93
Engineers	855 54
Amount carried forward	$21,211 11

Amount brought forward	$21,211 11
Cleaning screens	626 21
Firemen	553 26
Cleaning and repairing pumps	413 40
Care of grounds	143 18
Supplies	123 38
Repairs on boilers	108 19
Care of buildings	85 46
Repairs on engines	81 84
Lights	32 94

SEWAGE PRECIPITATION TANKS.

Chemicals	5,292 00
Labor in sludge disposal	4,472 33
Labor on sewage precipitation	1,309 76
Electrical power	545 50
Repairs on machinery	209 34
Repairs on buildings	199 96
Miscellaneous supplies	50 49
Lights	19 36
Repairs on tanks	1 65
	$35,479 36

The *net* expenditure for construction of sewers to December 31, 1908, inclusive, was $8,175,216 3

The *net* expenditure for maintenance of sewers to December 31, 1908, inclusive, was $1,647,895 2

Bills deposited with the city treasurer for collection from October 1 to December 31, 1908, inclusive, amounted to . . . $2,605 53

As follows:

Miscellaneous work	$1,392 30
Cleaning private connections	111 92
Electrical power furnished at carpenter shop	21 84
Second-hand manhole frame and cover	3 50
Pumping out cellar	2 25
Sewer material	899 39
Laying private drain for D. & W. Fuse Co.	174 33
	$2,605 53

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of $2,274 47

As follows:

Miscellaneous work	$1,074 02
Cleaning private connections	101 42
Electrical power furnished at carpenter shop	19 56
Second-hand manhole frame and cover	3 50
Pumping out cellar	2 25
Sewer material	899 39
Laying private drain for D. & W. Fuse Co.	174 33
	$2,274 47

HIGHWAYS.

Two permits to open streets were issued during the quarter.

December 1st, the proposal of the Narragansett Improvement Company, to lay asphalt pavement around the new post office building at $1.50 per square yard, with binder course, and $2.25 per square yard on a concrete base, was accepted and a contract subsequently executed.

One thousand two hundred and six notices to build or repair sidewalks were served on the abutting owners during the year 1908. The work, including one hundred and ten brought over from preceding year, was done as follows:

By the abutting owners	1,060
By the city, at the expense of the abutting owners	82
Extension of time granted to	63
Work not done	111

The length of received streets December 31, 1908, was about 239.96 miles, measured on street lines and to street line intersection. But, as it is customary in street construction or street paving to complete the work to the curb line intersection, the lengths in the following tables are measured on those lines and sub-divided as follows:

Received street	246.50 miles.
Streets curbed and built with macadam	169.88 miles.
Streets not curbed, but the roadway macadamized or graveled	28.50 miles.
Streets curbed and paved	36.99 miles.
Streets received, but not improved	11.13 miles.
Total	246.5 miles.

The actual area of street pavement is 803,325 square yards. If this is estimated to an average width of roadway of 30 feet, it would be equal to 45.64 lineal miles, and is subdivided as follows:

Granite blocks	33.49 miles.
Cobble	5.02 miles.
Asphalt	5.12 miles.
Bitulithic	1.20 miles.
Vulcanite	.39 miles.
Brick	.42 miles.

In addition to the general patching necessary to maintain the streets in good repair, the following work has been done during the year ending December 31, 1908, namely:

New streets built of macadam	8,577.00 linear feet.
Streets paved with new material	5,376.00 linear feet.
Curbing set	15,412.10 linear feet.
Streets rebuilt	5,443.00 linear feet.
Streets resurfaced	181,875 00 linear feet.
Streets graded	8,783.30 linear feet.
Asphalt pavement laid	806.00 square yards.
Block pavement laid	16,344.30 yards.
Cobble pavement laid	605.30 square yards.
Asphalt pavement relaid	3,921.40 square yards.
Block paving relaid	31,921.70 square yards.
Brick paving relaid	187.00 square yards.
Cobble paving relaid	1,830.20 square yards.
Concrete sidewalks laid	2,320.70 square yards.
Concrete sidewalks patched and top-dressed	2,749.20 square yards.
Crushed stone used	49,558.00 tons.
Screened gravel used	12,200.00 cubic yards.

Of the above amount of pavement laid and relaid, the cost of laying and relaying 27,837.70 square yards, amounting to $42,169.01 was paid by the corporations for which the work was done.

The following named streets, aggregating 34.45 miles were resurfaced during the year:

Academy avenue, from Atwells to Smith street.
Acorn street, from West Exchange to Atwells avenue.
Admiral street, from Charles to Douglas avenue.
Alverson avenue, from Hartford to Plainfield street.

Angell street, from Wayland avenue to Butler.
Appleton street, from Julian to Delaine.
Armington avenue, from Academy to Carleton street.
Arthur avenue, from Atwells to Federal street.
Bath street, from Orms to Chalkstone avenue.
Battey street, from Westminster to Broadway.
Benevolent street, from Hope to Governor.
Blackstone boulevard, from Hope street to Mount avenue.
Blackstone boulevard, from President avenue to Margrave.
Branch avenue, from Opper street to Vandewater.
Bridgham street, from Cranston to Elmwood avenue.
Broad street, from Somerset to city line.
Brown street, from Waterman to Creighton.
Bucklin street, from Burnett to Dexter.
Burnside street, from Public to Thurbers avénue.
Burrington street, from Calhoun avenue to Niantic.
Butler avenue, from Angell street to Ticonderoga avenue.
Calhoun avenue, from Balch street to Burrington.
California avenue, from Virginia to Michigan.
Cambridge street, from Academy avenue to Sears.
Camp street, from Olney to Evergreen.
Chaffee street, from Appleton to Manton avenue.
Chalkstone avenue, from Academy to Geneva street.
Chapin avenue, from Parade street to Messer.
Charles street, from Silver Spring to Branch avenue.
Comstock avenue, from Prairie to Broad street.
Corliss street, from West River to Livingstone.
Cromwell street, from Dexter to Elmwood avenue.
Dean street, from Westminster to Fountain.
Delaine street, from Valley to Manton avenue.
Dexter street, from Westminster to Cranston.
Diamond street, from Cranston to Superior.
Dodge street, from Cranston to Westminster.
Dudley street from Eddy to Culver.
Duncan avenue, from North Main street to Knowles.
East George street, from Governor to Gano.
East Manning street, from Ives to Gano.
Eaton street, from Douglas avenue to Elmhurst.
Elmhurst avenue, from Smith street to Eaton.
Elmwood avenue, from railroad bridge to city line.
Elmwood avenue, from Daboll street to Carter.
Elmwood avenue, from Earl street to Ontario.
Elmwood avenue, from Longfellow street to Roger Williams avenue.
Farmington avenue, from Silver Lake to city line.
Federal street, from Knight to Arthur avenue.
Fenner street, from Broad to Westminster.
Fountain street, from Carpenter to Dean.
Fruit Hill avenue, from Manton to Woonasquatucket.
Gano street, from Angell to Waterman.
Gardner street, from Camp to Knowles.
Glenham street, from Broad to Taylor.

Greeley street, from Charles to Opper.
Harkness street, from Westminster to Meader.
Hartford avenue, from Heath street to Killingly.
Haskins street, from Lockwood to Broad.
Hawes street, from Charles to Black.
Hawthorne street, from Bucklin to Elmwood avenue.
Holden street, from Promenade to Smith.
Hope street, from Olney to Cypress.
Hospital street, from Globe to Bassett.
Ives street, from Angell to Pitman.
Jenkins street, from North Main to Camp.
Julian street, from Appleton to Manton avenue.
Kinsley avenue, from Harris to 1,000 feet westerly.
Langdon street, from Alaska to Branch avenue.
Laurel avenue, from Blackstone boulevard to 400 feet westerly.
Leland street, from Promenade to Edith.
Lockwood street, from Hospital to Pine.
Lowell avenue, from Hartford to Plainfield street.
Madison street, from Potter avenue to Huntington.
Manning street, from Brook to Hope.
Manton avenue, from Chalkstone to Fruit Hill.
Manton avenue, from Florence street to Amherst.
Marlborough avenue, from Broad street to Taylor.
Meader street, from Harkness to Tobey.
Merino avenue, from Hartford 300 feet northerly.
Montgomery avenue, from Virginia to Maryland.
North Main street, from Sexton to city line.
Ohio avenue, from Maryland to Michigan.
Orchard avenue, from Wayland to Butler.
Orms street, from Black to Ormsbee avenue.
Parade street, from Cranston to Hollis.
Park street, from Promenade to Brownell.
Parkis avenue, from Elmwood to Broad street.
Pavilion avenue, from Eddy street to Ocean.
Pearl street, from Friendship to Plain.
Pitman street, from Gano to East River.
Pleasant street, from Knowles to Camp.
Pocasset avenue, from Webster to Laurel Hill.
Pond street, from Fenner to Pearl.
Promenade street, from Calverly to Hemlock.
Prospect street, from Angell to Waterman.
Putnam street, from Amherst to Atwells avenue.
Quaid street, from Charles to Hawes.
Ridge street, from Tobey to Atwells avenue.
Rochambeau avenue, from Blackstone boulevard to city line.
Rugby street, from Nebraska to Pavilion avenue.
Smith street, from Park to Whitford avenue.
Somerset street, from Broad to Providence.
Sprague street, from Dexter to Elmwood avenue.
Spruce street, from Acorn to Lily.
Summer street, from Broad to Pine.

Sunset avenue, from Killingly street to the city line.
Taylor street, from Public to Comstock avenue.
Thayer street, from Angell to Waterman.
Tobey street, from Ridge to Broadway.
Union avenue, from Whitehall street to Priscilla avenue.
Upton avenue, from Blackstone boulevard 200 feet westerly.
Valley street, from Bath to Atwells avenue.
Van Zandt street, from Calhoun avenue to Pacific.
Violet street, from Orms to Chalkstone avenue.
Virginia avenue, from Montgomery to Washington.
Virginia avenue, from California to Indiana.
Washington street, from Jackson to Knight.
Waterman street, from East River to Butler avenue.
Wayland avenue, from Angell street to Pitman.
Webster avenue, from Pocasset to Plainfield street.
Wesleyan avenue, from Elmwood to Broad street.
West Exchange street, from Brayton avenue to Dean street.
West River street, from Cross to the West River bridge.
Woodward road, from Veazie street to the city line.
Woonasquatucket avenue, from Fruit Hill to the city line.

1.66 miles of streets have been graded during the year, namely:

Boylston avenue, from Montague street to Olney.
Curtis street, from Bosworth to Pelham.
Eaton street, from Douglas avenue to Elmhurst.
Elmhurst avenue, from Smith street to Eaton.
Fairmount avenue, from Mount Pleasant to Leah street.
Hillside avenue, from North Main street to a point 685 feet easterly.
Leah street, from Atwells avenue to Fairmount.
Molloy street, from Rowan to Academy avenue.
Pelham street, from Aleppo to Manton avenue.
Rathbone street, from Promenade to Valley.
Wyatt street, from Plain to Eddy.

1.03 miles of streets were rebuilt during the year, namely:

Academy avenue, from Chalkstone to Smith street.
East George street, from Ives to 200 feet easterly.
Manning street, from Hope to Brook.
West River street, from Cross to Corliss.

During the quarter, the following work was completed:

SIDEWALKS CURBED AND GUTTERS PAVED.

Date of order.

May 21, 1908, *Boylston avenue, from Montague street to Olney.*

Date of order.			
May	21,	1908,	*President avenue, from Wayland to Cole.*
"	"	"	*Molloy street, from Rowan to Academy avenue.*

The following work, ordered by the board of aldermen and city council, had not commenced December 31, 1908, namely:

SIDEWALKS CURBED AND GUTTERS PAVED.

Date of order.			
Nov.	19,	1908,	*Hammond street, east side, from Cranton to Durfee.*

Bills approved on account of highways from October 1 to December 31, 1908, inclusive, amounted to:

Regular appropriation		$84,486 76

Classified as follows:

Cleaning streets	$19,738 45	
Repairs on unpaved streets	18,565 73	
Crushed stone — material and labor	18,143 80	
Repairs on paved streets	10,315 71	
Barn expenses	2,523 44	
Blacksmith and wheelwright shop	2,371 76	
Screening gravel	2,012 86	
Steam rollers — repairs and supplies	901 00	
Tools, implements, etc	866 22	
Labor on material	795 44	
Repairs on stone crushers	507 70	
Watering streets	475 83	
Horses, wagons, harnesses, etc	465 85	
Superintendent's salary	422 57	
Stone — paving and crosswalk	382 08	
Watchman at city yard	174 60	
Building driveways, etc	158 15	
Sundries	109 14	
Office expenses, city yard	57 48	
Car fares	40 00	
Fencing streets — material and labor	33 45	
Removing snow and ice	32 64	
Repairs on buildings, highway yard	22 24	
Telephone lines	5 60	
Removing stone crusher to Northup avenue	15	
		$79,121 29
Amount carried forward		$79,121 29

Amount brought forward.....		$79,121 29

New Work—Building and Rebuilding Streets, Etc.

Sidewalks Curbed and Gutters Paved.

Alton street, from Regent avenue to Wisdom.....	$30 08	
Boylston avenue, from Montague street to Olney...	1,007 78	
Molloy street, from Rowan to Academy avenue.....	1,972 60	
President avenue, from Wayland to Cole.....	2,355 01	
		5,365 47
		$84,486 76

Bills deposited with the city treasurer for collection from October 1 to December 31, 1908, inclusive, amounted to . . . $28,367 44

As follows:

Labor and material.....	$26,726 33
Blacksmith and harness work for other departments.....	768 65
Street sweepings.....	324 75
Building driveways, etc.....	295 45
Boarding horses for other departments.....	166 66
Manure from barn.....	76 00
Empty oil barrels.....	9 60
	$28,367 44

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of $27,250 86

As follows:

Labor and material.....	$25,507 92
Blacksmith and harness work for other departments.....	654 01
Boarding horses for other departments.....	412 20
Street sweepings.....	328 75
Building driveways, etc.....	262 38
Manure from barn.....	76 00
Empty oil barrels.....	9 60
	$27,250 86

SIDEWALKS AND CURBING.

Bills approved on account of sidewalks and curbing from October 1 to December 31, 1908, inclusive, amounted to . . . $3,223 92

Charged as follows:

Concreting sidewalks	$2,071 39	
Repairing sidewalks and curbing	1,125 36	
Granite curbing	27 17	
	$3,223 92	

Bills deposited with the city treasurer for collection (for granite curbing), from October 1 to December 31, 1908, inclusive, amounted to $268 04

During the quarter, coupons from bills collected (for granite curbing), bave been returned by the city treasurer and receipted for to the amount of $346 19

CITY ENGINEER.

Bills approved on account of the city engineer's department from October 1 to December 31, 1908, inclusive, amounted to $11,895 82

Charged as follows:

Salary — city engineer	$1,125 00	
Salaries of assistants	8,645 42	
Salaries of clerks	933 71	
Installation of card index	602 77	
Supplies, drawing material, etc	313 14	
Car fares	202 80	
Telephone lines	36 43	
Meteorological instruments and repairs	29 90	
Sundries	3 60	
Instruments and repairs	3 05	
	$11,895 82	

BRIDGES.

Bills approved on account of bridges from October 1 to December 31, 1908, inclusive, amounted to $8,896 58

Charged as follows:

Barn expenses	$120 66
Branch avenue bridge—to rebuild	468 10
Building at city yard	10 96
Car fares	25 00
Crawford street bridge	14 76
Eagle street bridge	14 89
Gaspee street bridge	47 51
Horses, wagons, harnesses, etc	19 97
Lumber, hardware, etc	476 51
Manton avenue bridge	343 25
Merino bridge	12 01
Mill street bridge	1 22
Nash lane bridge	57 25
Point street bridge	169 29
Post office bridge	134 99
Promenade street bridge	654 73
Randall street bridge	13 95
Red bridge	205 58
Rent of keeper's house—Washington bridge	36 00
Salaries—Point street bridge	1,038 25
Salaries—Red bridge	565 22
Salaries—Washington bridge	592 82
Smith street bridge	5 11
Sundries	302 81
Telephone lines	2 68
Tools	213 97
Washington bridge	3,249 13
Washington row bridge	46 64
Weybosset bridge	53 32
	$8,896 58

Bills deposited with the city treasurer for collection from October 1 to December 31, 1908, inclusive, amounted to . . . $688.39

As follows:

Asphalt pavement laid on the north side of new post office	$576 38
The Rhode Island Company for labor and material	110 51
Sale of old lumber	1 50
	$688 39

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of $20 63

As follows:

Asphalt pavement laid on the north side of new post office	$19 13
Sale of old lumber	1 50
	$20 63

PUBLIC LIGHTS.

Bills approved on account of the public lights from October 1 to December 31, 1908, inclusive, amounted to $70,293 8

Charged as follows:

Arc lights	$50,228 66
Incandescent lights	13,763 84
Welsbach lights	6,228 65
Salaries	63 00
Setting and removing gas posts	9 69
	$70,293 84

Bills deposited with the city treasurer for collection from October 1 to December 31, 1908, inclusive, amounted to . . . $40 9

As follows:

Sale of old iron	$27 45
Gas posts, lanterns and frames	7 50
Removing gas post	6 00
	$40 95

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of $41 95

As follows:

Sale of old iron	$27 45
Gas posts, lanterns and frames	8 50
Removing gas post	6 00
	$41 95

PUBLIC WORKS OFFICE.

Bills approved on account of the public works office from October 1 to December 31, 1908, inclusive, amounted to . . . $5,982 92

Charged as follows:

Salaries of commissioner and secretary	$1,925 00
Salaries of office assistants	3,813 01
Office supplies	225 36
Telephone lines	19 55
	$5,982 92

FORESTRY.

Bills approved on account of the forestry department from October 1 to December 31, 1908, inclusive, amounted to: . . $1,367 77

Charged as follows:

Salary, city forester	$380 00
Trimming, repairing and removing trees and shrubs	769 95
Barn expenses	93 09
Spraying trees and shrubs	71 28
Tools and supplies	37 75
Horses, wagons, harnesses, etc	15 70
	$1,367 77

WALTER F. SLADE,

Commissioner.

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As follows:

Sale of old iron	$27 45
Gas posts, lanterns and frames	8 50
Removing gas post	6 00
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Horses, wagons, harnesses, etc	15 70
	$1,367 77

WALTER F. SLADE,

Commissioner.

1909.] CITY DOCUMENT. [No. 18.

ONE HUNDRED AND FIFTH

QUARTERLY REPORT

OF THE

Department of Public Works

OF THE

CITY OF PROVIDENCE, R. I.

QUARTER ENDING MARCH 31, 1909.

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1915

REPORT.

OFFICE OF THE DEPARTMENT OF PUBLIC WORKS,
CITY HALL, PROVIDENCE, R. I., April 1, 1909.

TO THE HONORABLE THE CITY COUNCIL:

In compliance with the requirements of Chapter 41 of the ordinances, the Commissioner of Public Works respectfully presents the one hundred and fifth quarterly report of the expenditures by the several departments under his direction and control, with statements of work ordered and the condition and cost of same, for the quarter ending March 31, 1909.

WATER WORKS.

January 6th, the proposal of the Congdon & Carpenter Company to furnish and deliver in the city yard 40,000 pounds of St. Joe brand of pig lead at $4.35 per cwt., was accepted and a contract subsequently executed.

The proposal of Macauley Brothers to furnish and deliver in the city yard 46,000 pounds of lead pipe of various sizes at $5.27 per cwt., was accepted and a contract subsequently executed.

January 8th, the proposal of the Camden Iron Works to furnish and deliver on the city wharf 1,343 tons of cast iron water pipe, in sizes from 4 to 16 inches, at $23.20 per net ton, was accepted and a contract executed.

January 14th, proposals were accepted and contracts executed subsequently for furnishing and delivering in the city yard the following material, viz.:

Allen & Reed, Inc., 222 stop valves of various sizes from 4 to 30 inches, at a lump sum of $4,000.00.

Coffin Valve Company, 25 flush hydrants with gates built in, at $86.00 each; 25 hydrant boxes and covers at $23.00 each; 8 special Providence pattern hydrants with boxes and covers complete, at $122.00 each.

January 18th, the proposal of William R. Conard of Burlington, N. J., to inspect the water pipe to be cast by the Camden Iron Works, for the sum of 20 cents per ton for all pipe cast, was accepted.

March 8th, the proposal of the Camden Iron Works to extend their contract to include 50 lengths of 12-inch E pipe at $23.20 per net ton, plus the sum of $25.00 for changing casting fixtures, was accepted.

March 9th, the proposal of the Coffin Valve Company to furnish 6 special fire hydrants, boxes and covers at the contract price, plus a charge of $5.00 for each box, was accepted.

The average daily consumption of water during the quarter ending March 31, 1909, was 14,974,448 gallons.

Water pipes were laid during the quarter as follows:

8-INCH.	
In Auburn street and Reservoir avenue in the town of Cranston	22.13 feet.
6-INCH.	
In Durham, Exeter, Hassan, Medway and Rill streets and in Lenox avenue	1,689.05 feet.
Total	1,711.18 feet.

or .324+mile.

Statement of sizes and lengths of pipe laid since the commencement of the work:

42-inch	25,630.70 feet.
36-inch	10,208.82 feet.
30-inch	61,410.07 feet.
24-inch	46,228.46 feet.
20-inch	9,626.59 feet.
16-inch	46,970.87 feet.
12-inch	128,231.03 feet.
10-inch	15,062.78 feet.
8-inch	316,552.14 feet.
6-inch	1,304,017.60 feet.
Total	1,963,939.06 feet.

or 371.958 + miles.

Statement of sizes and lengths of pipe laid for the special water service for fire protection since the commencement of the work:

24-inch	4,299.44 feet.
16-inch	35,053.98 feet.
12-inch	5,422.25 feet.
Total	44,775.67 feet.

or 8.480 + miles.

One fire hydrant was set during the quarter at the following location.

Medway street, north side, 317 feet east of Butler avenue.

The total number of fire hydrants, exclusive of those for special service for fire protection, is now two thousand one hundred and seventy-five — two thousand and thirty-one flush and one hundred and forty-four post.

The total number of fire hydrants on the special water service for fire protection is one hundred and twenty-four.

During the quarter, two hundred and seven water meters were set, of which number sixty-five were to replace other meters. The use of four meters was discontinued.

The following meters were in use at the close of the quarter:

Kind.	Size.									Total.
	⅝-in.	¾-in.	1-in.	1½-in.	2-in.	3-in.	4-in.	6-in.	8-in.	
Ball & Fitts	1,383	282	64	8	2	.....	.....	.....	.....	1,739
Ball & Fitts, rotary	.....	.....	1	.....	.....	.....	1	.....	.....	2
Crown	10,067	1,403	410	185	59	35	34	1	.....	12,194
Empire	2,195	232	98	61	16	1	1	.....	.....	2,604
Fales, Jenks & Sons	.....	.....	1	.....	.....	.....	.....	.....	.....	1
Gem	.....	.....	.....	.....	19	38	21	5	.....	83
Hersey	59	.....	.....	.....	.....	.....	.....	1	.....	60
Nash	626	.....	.....	.....	.....	.....	.....	.....	.....	626
Thomson	5,182	420	74	53	20	7	7	1	.....	5,764
Trident	102	.....	1	.....	.....	.....	.....	.....	.....	103
Venturi	.....	.....	.....	.....	.....	.....	.....	.....	1	1
Worthington	141	.....	.....	.....	.....	.....	.....	.....	.....	141
	19,755	2,337	649	307	116	81	64	8	1	23,318

One hundred and thirty plumber's licenses were issued during the quarter, all of which expire December 31, 1909.

Five hundred and seventeen permits to do plumbing work were issued during the quarter.

Ninety-eight applications for water were made during the quarter, making the total number twenty-nine thousand four hundred and fifty-six.

The number of new service stops opened during the quarter was ninety-eight.

The total number of service stops opened to March 31, 1909, inclusive, was twenty-eight thousand seven hundred and forty-six. The number in actual use March 31, 1909, was twenty-six thousand three hundred and fifty-two.

The amount of bills approved on account of water works from January 1, to March 31, 1909, inclusive, was:

For maintenance, ... $80,305 34

Classified as follows:

PETTACONSET PUMPING STATION.

Coal and wood	$6,073 84	
Firemen	902 16	
Sundries	839 30	
Engineers	560 82	
Superintendence	408 00	
Oil, waste and packing	183 24	
Care of grounds	150 78	
Repairs on boilers	119 48	
Labor on fuel	73 08	
Barn expenses	60 86	
Allis-Chalmers high-duty engine	39 59	
Lights	33 08	
Horses, wagons, harnesses, etc	4 63	
		$9,448 86

SAND FILTRATION PLANT.

Installation	$22,030 97	
Cleaning beds	2,802 16	
Labor and supplies, pumping	1,971 20	
Laboratory—labor and supplies	545 32	
Miscellaneous supplies	91 25	
Repairs on buildings	28 50	
		27,469 40

SOCKANOSSET RESERVOIR.

Sundries	$244 85	
Watchman	168 00	
		412 85

HOPE PUMPING STATION.

Sundries	$641 99	
Engineers	609 00	
Repairs on boilers	464 06	
Firemen	409 50	
New engine and boiler, to furnish and erect	205 74	
Lights	69 35	
Oil, waste and packing	1 25	
		2,400 89
Amount carried forward		$39,732 00

Amount brought forward		$39,732 0
Hope Reservoir.		
Watchman	$223 50	
Sundries	37 52	
		261 0
Fruit Hill Reservoir.		
Sundries	$329 76	
Watchman	168 00	
		497 76
Meter Department.		
Water meters	$2,342 76	
Setting and repairing meters	1,679 03	
		4,021 79
Pipe Line and Service Stops.		
Repairs	$5,090 09	
Inspection of pipe line and services	2,640 50	
Salaries of assistant engineers	1,933 50	
Superintendence — salaries	842 82	
		10,506 91
Pipe Yard.		
Fire hydrants, boxes and covers	$5,401 10	
Service pipe	2,419 72	
Special castings	2,407 26	
Pig lead and tin	1,920 36	
Laying service pipe	1,515 52	
Laying water pipe	1,512 00	
Taps and stops	1,351 48	
Special water service for fire protection	749 03	
Tools	143 39	
Pipe yard, office expenses	85 69	
Labor on and carting pipe	27 50	
Stop valves	10 87	
		17,343 92
Miscellaneous.		
Town of Warwick tax	$4,344 00	
Clerks' and inspectors' salaries	1,696 20	
Barn expenses	861 01	
Prevention of defilement of the Pawtuxet	300 00	
Horses, wagons, harnesses, etc	232 03	
Telephone lines	153 93	
Car fares	150 00	
Public drinking fountains and troughs	2 42	
Sundries	2 35	
		7,741 94
		$80,305 34

The total expenditures to March 31, 1909, inclusive, was $11,847,297 82

The *net* expenditure for maintenance from January 1 to March 31, 1909, inclusive, was	$73,589 40
The *net* expenditure for maintenance to March 31, 1909, inclusive, was	$4,008,465 12

The value of the water works system January 1, 1909, as estimated by the city engineer, was as follows:

Pettaconset pumping station	$340,694 00	
Hope pumping station	112,151 77	
Sockanosset, Hope and Fruit Hill reservoirs	668,949 81	
Main lines and distribution pipes	2,855,152 25	
Real estate in Pawtuxet and Lincoln	15,975 00	
Tools and supplies	39,942 62	
		$4,032,865 45

Bills deposited with the city treasurer for collection from January 1 to March 31, 1909, inclusive, amounted to . . . $478,996 70

As follows:

Water	$472,041 28	
Water meters	2,742 00	
Labor and material, laying services, etc	1,943 10	
Setting and repairing meters	1,774 05	
The Rhode Island Company for one-half of expense of electrolysis investigation	239 67	
Penalties	124 00	
Rent of real estate	122 60	
Permanently closing service stops	10 00	
		$478,996 70

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of $474,007 50

As follows:

Water	$467,167 56
Water meters	2,812 50
Setting and repairing meters	1,767 57
Amount carried forward	$471,747 63

Amount brought forward	$471,747 63	
Labor and material, laying services, etc.	1,753 20	
The Rhode Island Company for one-half of expense of electrolysis investigation	239 67	
Rent of real estate	133 00	
Penalties	124 00	
Permanently closing service stops	10 00	
		$474,007 50

SEWERS.

One hundred and forty-one drain layer's licenses were issued during the quarter, all of which expire December 31, 1909.

During the quarter ending March 31, 1909, one hundred and forty-one permits were issued to drain layers—sixty-two for new work and seventy-nine for extension and repair of drains.

January 4th, the proposal of Waldo Brothers, Boston, Mass., to furnish and deliver the sewer material required during the year 1909 was accepted and a contract executed subsequently. Amount, $9,330.43.

The proposals to furnish and deliver material, by the following parties, were accepted, viz.:

Nelson A. Bennett 25 catch-basin inlet stones, at $5.00 each.
Isidor Capaldi 110 catch-basin inlet stones, at $6.00 each.
Charles M. Kelly 68 catch-basin flag stones at $5.35 each.
Edwin D. Allen 67 catch-basin flag stones, at $5.35 each.

January 9th, the proposal of William L. Barrell Company to furnish and deliver 15,000 yards of 40-inch eleven-ounce U. S. standard army duck, at 15⅞ cents per yard, was accepted.

January 12th, the following proposals for furnishing and delivering cement were accepted and contracts executed, viz.:

William M. Harris, Jr., not to exceed 7,500 barrels of "Nazareth" Portland, at $1.61 per barrel.

Edwin D. Allen, not to exceed 1,500 barrels of "Improved Shields" Rosendale, at $1.10 per barrel.

Assessments for the cost of constructing sewers were certified to the city treasurer during the quarter as follows:

Longfellow and Melrose streets, Section 7	$1,732 45
Lowell avenue, from Plainfield street to Hartford avenue	7,376 42
Alverson avenue, from present end of sewer to Plainfield street.	1,809 09
Dodge street, from the northerly line of Bridgham street school estate to Westminster street	1,090 14
Ormsbee avenue, from angle at railroad to Lock street	1,383 63
Clarence street, from a point about 100 feet east of Webster avenue to Priscilla	899 21
Corliss street, from Cross to West River	2,895 62
Elmhurst avenue and Smith street, from near Eaton to present end of sewer in Smith	5,895 19
Eaton street, from summit at Roslyn to Douglas avenue	9,808 87
Wisdom avenue, from near Academy to Alton street, and in Alton from Wisdom avenue to Regent	3,723 63
Greeley street, from near Charles to Opper, and in Opper from Greeley to Branch avenue	2,920 58
	$39,524 83

During the quarter, contracts for the construction of sewers were awarded and subsequently executed, as follows:

[The amounts given below are what are estimated will be paid the contractors for labor, and do not include the cost of inspection and materials.]

To Frederick E. Shaw.

No. of resolution.	Date of approval.		
476.	Dec. 19, 1908,	*Huron street, from near Wisdom avenue to Regent,*	$249 90
477.	" " "	*Temple street, from a point about 100 feet north of Potter avenue to Public street,*	$355 70
478.	" " "	*Union avenue, from a point 300 feet west of Webster to Webster,*	$446 50

No. of resolution.	Date of approval.				
108.	Mar. 19, 1909,			*Fern street, from Berkley to Chalkstone avenue,*	$299 50
109.	"	"	"	*Home avenue, from Chalkstone to Glover street,*	$938 50
110.	"	"	"	*Hope street, from Hart to Rochambeau avenue,*	$3,370 30
111.	"	"	"	*Ledge street, from Charles to Silver Spring, and in Silver Spring, from Ledge to Northup avenue,* . . .	$11,000 00
112.	"	"	"	*Lena street, from Judith to Latham, and in Latham, from Lena to Plainfield,* . . .	$627 60
113.	"	"	"	*Oakland avenue, from Smith street to Eaton,* .	$1,678 30
114.	"	"	"	*Saratoga street, from a point about 95 feet east of Broad to Baxter,* .	$449 35

During the quarter, the construction of the following sewer was completed, namely:

No. of resolution.	Date of approval.		Date of completion.
385.	Oct. 6, 1908,	*Hugo street, from the city hospital land to Douglas avenue.* . .	Jan. 7, 1909.

Work upon the following sewers was in progress at the close of the quarter, namely:

No. of resolution.	Date of approval.	
366.	Sept. 19, 1908,	*Hope street, from a point 200 feet southerly of Cypress to Larch, and from about 50 feet north of Larch to Savoy; also in Savoy street, from Hope to Morris avenue.*
367.	" " "	*Larch street, from a point 75 feet west of Ivy to Camp, and from near Ivy easterly to Morris avenue.*
403.	Oct. 19, 1908,	*Blackstone boulevard, west side, from Mount avenue to end of present sewer near Upton.*

Work upon the following sewers, completing the work ordered by the city council, had not commenced March 31, 1909, namely:

No. of resolution	Date of approval.	
365.	Sept. 19, 1908,	*Hanover street, from near Elmwood avenue to Bucklin street.*
476.	Dec. 19, "	*Huron street, from near Wisdom avenue to Regent.*
477.	" " "	*Temple street, from a point about 100 feet north of Potter avenue to Public street.*
478.	" " "	*Union avenue, from a point 300 feet west of Webster to Webster.*
108.	March 19, 1909,	*Fern street, from Berkley to Chalkstone avenue.*
109.	" " "	*Home avenue, from Chalkstone to Glover street.*
110.	" " "	*Hope street, from Hart to Rochambeau avenue.*
111.	" " "	*Ledge street, from Charles to Silver Spring, and in Silver Spring from Ledge to Northup avenue.*

No. of resolution.	Date of approval.	
112.	March 19, 1909,	*Lena street, from Judith to Latham, and in Latham from Lena to Plainfield.*
113.	" " "	*Oakland avenue, from Smith street to Eaton.*
114.	" " "	*Saratoga street, from a point about 95 feet east of Broad to Baxter.*

The amount of bills approved on account of sewers from January 1 to March 31, 1909, inclusive, was:

For construction, ... $11,452 27

Charged as follows:

Material	$4,385 33
Contract reservations	477 00
Sundries	340 67
Testing cement	291 07
Tools	95 00
Building scow for residue disposal	36 93
Sewer in Blackstone boulevard, west side, from Mount avenue to end of present sewer near Upton	366 64
Sewer in Hope and Savoy streets	203 15
Sewer in Hugo street, from the city hospital land to Douglas avenue	45 34
Sewer in Larch street, from 75 feet west of Ivy to Camp, and from near Ivy to Morris avenue	5,211 14
	$11,452 27

For maintenance. $29,929 69

Classified as follows:

Cleaning basins and sewers	$3,961 85
Repairing basins and sewers	2,928 39
Cleaning and repairing old drains	819 26
Removing snow and ice from inlets	642 99
Inspection of connections	633 95
Barn expenses	553 38
Amount carried forward	$9,539 82

Amount brought forward	$9,539 82
Horses, wagons, harnesses, etc.	455 29
Salary, superintendent	408 00
Tools	347 75
Office expenses	71 36
Telephone lines	45 10
Sundries	38 93
Carpenter shop	28 96
Car fares	20 00
Cleaning private connections	10 50

ERNEST STREET STATION.

Coal and wood	$2,121 44
Engineers	862 99
Firemen	665 50
Cleaning screens	662 88
Cleaning and repairing pumps	589 60
Care of grounds	141 12
Repairs on boilers	59 89
Repairs on buildings	54 11
Repairs on engines	49 83
Supplies	45 69
Lights	36 44
Care of buildings	14 96

SEWAGE PRECIPITATION TANKS.

Labor in sludge disposal	$4,591 56
Chemicals	4,344 00
Miscellaneous supplies	2,055 99
Labor on sewage precipitation	1,387 53
Electrical power	516 00
Repairs on machinery	341 02
Fuel	291 19
Repairs on buildings	110 57
Lights	21 67
	$29,929 69

The *net* expenditure for construction of sewers to March 31, 1909, inclusive, was $8,186,490 98

The *net* expenditure for maintenance of sewers to March 31, 1909, inclusive, was $1,676,594 93

Bills deposited with the city treasurer for collection from January 1 to March 31, 1909, inclusive, amounted to $1,260 87

As follows:

Miscellaneous work	$969 90
Cleaning private connections	49 50
Sale of second-hand stone	40 00
Electrical power furnished at carpenter shop	18 07
Pumping out cellar	5 75
Sewer material	161 40
Laying drain to curbstone	16 25
	$1,260 87

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of $1,407 61

As follows:

Miscellaneous work	$1,095 55
Cleaning private connections	48 75
Sale of second-hand stone	40 00
Electrical power furnished at carpenter shop	39 91
Pumping out cellar	5 75
Sewer material	161 40
Laying drain to curbstone	16 25
	$1,407 61

HIGHWAYS.

One permit to open streets was issued during the quarter.

February 18th, the following proposals for furnishing radius curbing and crosswalk stone were accepted, namely:

R. B. Marriott and Sons, 60 pieces of 8-foot radius curbing at $2.50 each.
Albert A. Lippitt, 10 pieces of 3-foot curb corners at $2.00 each.
400 feet of 14-inch crosswalk stone at 40 cents per foot.
400 feet of 24-inch crosswalk stone at 50 cents per foot.

February 19th, proposals for furnishing and delivering granite blocks by the following parties for the sum of $1.45 per square yard, were accepted namely:

Joseph Newall and Company for 85,000.
Sweeney Granite Works for 15,000.

February 20th, the proposal of the Taylor Iron and Steel Company to furnish four sections of a crusher screen and 138 feet of steel chain for the sum of $500.50, was accepted.

March 12th, the proposal of the Connecticut Trap Rock Quarries to furnish and deliver in the city yard 900 tons of crushed stone at $1.25 per ton, was accepted.

March 16th, a statement was prepared of the cost of curbstones set, ascertained by the commissioner and certified to the board of aldermen for approval, as follows, namely:

Alton street, from Regent avenue to Wisdom street	$452 52
Baxter street, from Saratoga to Reynolds avenue	216 32
Baxter street, from Potter avenue to Norwich	370 83
Boylston avenue, from Montague street to Olney	984 17
Clarence street, from Webster avenue to Priscilla	689 93
Curtis street, from Bosworth to Pelham	911 87
Fairmount avenue, from Mount Pleasant to Leah street	1,033 87
Hathaway street, north side, from Elmwood avenue to its westerly termination	478 98
Hillside avenue, from North Main street to about 700 feet westerly	947 39
Leah street, from Atwells avenue to the north line of Fairmount avenue	504 47
Molloy street, from Rowan to Academy avenue	1,185 59
Pelham street, from Manton avenue to Aleppo street	535 78
President avenue, from Wayland to Cole	776 82
Wisdom avenue, from Academy to Alton street	1,419 14
Wyatt street, from Plain to Eddy	434 78
	$10,942 26

The following work, ordered by the board of aldermen and city council, had not commenced March 31, 1909, namely:

Sidewalks Curbed and Gutters Paved.

Date of order.	
November 19, 1908,	*Hammond street, east side, from Cranston to Durfee.*
March 18, 1909,	*Lenox avenue, from Hamilton street to Emerson.*

Date of order.			
March	18,	1909,	*Home avenue, from Chalkstone to Glover street.*
"	"	"	*Oakland avenue, from Eaton street to Smith.*
"	"	"	*Saratoga street, from Broad to Baxter.*
"	"	"	*Huron street, from Wisdom avenue to Regent.*
"	"	"	*Fern street, from Chalkstone avenue to Berkley street.*
"	"	"	*Hanover street, from Elmwood avenue to Dexter street.*
"	"	"	*Temple street, from Public to Potter avenue.*

Bills approved on account of highways from January 1 to March 31, 1909, inclusive, amounted to:

Regular appropriation, ... $51,535 96

Charged as follows:

Crushed stone — material and labor	$13,158 23
Cleaning streets	10,070 07
Screening gravel	5,919 88
Removing snow and ice	3,959 48
Barn expenses	3,376 74
Blacksmith and wheelwright shop	3,004 75
Stone — paving and crosswalk	2,382 12
Removing stone crusher to Northup avenue	1,881 45
Repairs on unpaved streets	1,682 18
Steam rollers -- repairs and supplies	1,556 91
Repairs on stone crushers	1,385 21
Labor on material	1,041 69
Tools, implements, etc	1,018 53
Superintendent's salary	442 00
Horses, wagons, harnesses, etc	215 29
Watchman at city yard	182 00
Amount carried forward	$51,276 53

Amount brought forward	$51,276 53
Office expenses, city yard	81 94
Sundries	59 73
Repairs on paved streets	58 30
Car fares	30 00
Building driveways, etc	17 96
Telephone lines	5 60
Fencing streets — material, and labor	4 26
Repairs on buildings, highway yard	1 64
	$51,535 96

Bills deposited with the city treasurer for collection from January 1 to March 31, 1909, inclusive, amounted to . . . $1,589 85

As follows:

Blacksmith and harness work for other departments	$855 42
Street sweepings	226 56
Boarding horses for other departments	184 88
Building driveways, etc	124 61
Labor and material	122 38
Manure from barn	76 00
	$1,589 85

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of $3,117 69

As follows:

Labor and material	$1,687 34
Blacksmith and harness work for other departments	768 65
Street sweepings	226 56
Boarding horses for other departments	184 88
Building driveways, etc	174 26
Manure from barn	76 00
	$3,117 69

SIDEWALKS AND CURBING.

Bills approved on account of sidewalks and curbing from January 1 to March 31, 1909, inclusive, amounted to . . . $761 43

Charged as follows:

Concreting sidewalks	$587 00
Repairing sidewalks and gutters	141 93
Granite curbing	32 50
	$761 43

Bills deposited with the city treasurer for collection from January 1 to March 31, 1909, inclusive, amounted to . . . $11,033 93

As follows:

Curbing bills	$10,942 26
Granite curbing	79 53
Concreting sidewalks	12 14
	$11,033 93

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of $2,647 62

As follows:

Curbing bills	$2,544 80
Granite curbing	90 68
Concreting sidewalks	12 14
	$2,647 62

CITY ENGINEER.

Bills approved on account of the city engineer's department from January 1 to March 31, 1909, inclusive, amounted to . $9,855 45

Charged as follows:

Salary — city engineer	$1,125 00
Salaries of assistants	7,387 00
Salaries of clerks	825 60
Supplies, drawing material, etc	238 43
Car fares	201 30
Instruments and repairs	41 69
Telephone lines	36 43
	$9,855 45

BRIDGES.

January 7th, the proposal of the McKinnon Construction Company to furnish and drive fourteen chestnut piles at foot-bridge over the Woonasquatucket river for the sum of $210.00, was accepted.

March 30th, the proposal of the Jamesville Construction Company, of Worcester, Mass., for building the abutments, wing walls and floor of the Branch avenue bridge over the West river for the sum of $3,018.80, was accepted and a contract subsequently executed.

March 31st, the proposal of the Eastern Bridge and Structural Company, of Worcester, Mass., to furnish and erect the steel work for the Branch avenue bridge over the West river, for the sum of $1,494.50, was accepted and a contract executed.

The proposal of William M. Harris, Jr., to furnish and deliver in accordance with specifications 18,500 feet of short leaf yellow pine at $23.00 per M., and 500 feet of spruce at $27.75 per M., was accepted.

Bills approved on account of bridges from January 1 to March 31, 1909, inclusive, amounted to $4,400 70

Charged as follows:

Atwells avenue bridge	$15 67
Barn expenses	123 47
Building at city yard	8 21
Crawford street bridge	9 39
Eagle street bridge	1 74
Foot bridge over Woonasquatucket river	448 88
Horses, wagons, harnesses, etc	46 17
Lumber, hardware, etc	14 42
Manton avenue bridge	1 12
Mill street bridge	6 72
Nash lane bridge	7 55
Park street bridge	32 01
Point street bridge	196 92
Post office bridge	15 57
Red bridge	146 69
Rent of keeper's house—Washington bridge	36 00
Salaries—Point street bridge	1,069 25
Salaries—Red bridge	564 85
Salaries—Washington bridge	564 85
Sundries	436 76
Telephone lines	2 68
Tools	252 84
Veazie street bridge	57 82
Wanskuck bridge	18 14
Wanskuck bridge—to rebuild	157 51
Washington bridge	140 35
Washington row bridge	2 34
West river street bridge	3 13
Weybosset bridge	19 85
	$4,400 70

Bills deposited with the city treasurer for collection for repairs on gate post Point street bridge, from January 1 to March 31, 1909, inclusive, amounted to . . . $33

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of $667

As follows:

Asphalt pavement laid on the north side of new post office	$557 25
The Rhode Island Company for labor and material	110 51
	$667 76

PUBLIC LIGHTS.

Bills approved on account of the public lights from January 1 to March 31, 1909, inclusive, amounted to $69,415 57

Charged as follows:

Arc lights	$49,078 56
Incandescent lights	13,962 67
Welsbach lights	6,262 74
Salaries	105 00
Setting and removing gas posts	6 60
	$69,415 57

PUBLIC WORKS OFFICE.

Bills approved on account of the public works office from January 1 to March 31, 1909, inclusive, amounted to $5,467 75

Charged as follows:

Salaries of commissioner and secretary	$2,000 00
Salaries of office assistants	3,180 41
Office supplies	264 21
Telephone lines	23 13
	$5,467 75

FORESTRY.

Bills approved on account of the forestry department from January 1 to March 31, 1909, inclusive, amounted to . . . $1,260 62

Charged as follows:

Salary, city forester	$336 00
Trimming, repairing and removing trees and shrubs	762 73
Barn expenses	76 02
Tools and supplies	74 73
Horses, wagons, harnesses, etc	11 14
	$1,260 62

WALTER F. SLADE,

Commissioner.

1909.] CITY DOCUMENT. [No. 19.

ONE HUNDRED AND SIXTH QUARTERLY REPORT

OF THE

Department of Public Works

OF THE

CITY OF PROVIDENCE, R. I.,

QUARTER ENDING JUNE 30, 1909

The Providence Press.
SNOW & FARNHAM, CITY PRINTERS,
21 Washington Street.
1909.

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REPORT.

OFFICE OF THE DEPARTMENT OF PUBLIC WORKS,
CITY HALL, PROVIDENCE, R. I., July 1, 1909.

TO THE HONORABLE THE CITY COUNCIL:

In compliance with the requirements of Chapter 41 of the ordinances, the Commissioner of Public Works respectfully presents the one hundred and sixth quarterly report of the expenditures by the several departments under his direction and control, with statements of work ordered and the condition and cost of same, for the quarter ending June 30, 1909.

WATER WORKS.

April 22nd, the proposal of the Coffin Valve Company to extend their contract to include 12 additional low-pressure hydrants with gates, at $86.00 each, and 12 hydrant boxes and covers at $23.00 each complete, plus a charge of $3.00 per box to cover cost of setting up machinery, was accepted.

May 15th, the proposal of the Seaconnet Coal Company to furnish and deliver at Hope pumping station 700 tons of D. L. & W. Scranton No. 2 buckwheat coal for $2.90 per net ton, was accepted.

June 11th, contracts for furnishing the coal required for one year from July 1, 1909, were awarded and subsequently executed, as follows:

For Pettaconset pumping station, 5,500 tons of New River, run of mine, at $3.65 per net ton delivered, to John R. White & Son.
For sand filtration plant, 40 tons of white ash stove at $6.10 per net ton delivered, to Eastern Coal Company.
For pipe yard, about 6 tons of white ash, stove or egg at $5.28 per net ton, at bidder's yard, to Eastern Coal Company.

June 28th, the proposal of Henry R. Worthington to furnish and deliver 250 $\frac{5}{8}$-inch model "D" all composition disc meters with straight-reading registers and connections for the sum of $6.75 each, was accepted.

The average daily consumption of water during the quarter ending June 30, 1909 was 14,504,323 gallons.

Water pipes were laid during the quarter as follows:

8-INCH.

In right of way from Ernest street, Eaton street; Narragansett street and Pontiac avenue in the town of Cranston	2,171.20 feet.

6-INCH.

In Barstow, Belden, Clarence, Carolina, Elma, Eaton, Fairfield, Fifth, Hereford, Hanover, Lynch, Ledge, Magdalene, Seventh and Temple streets; Edgemere, Fort, Georgia, Irving and Yale avenues; in Bridge street; Grand and Lookout avenues in the town of Cranston	6,030.98 feet.
Total	8,202.18 feet.

or 1.553+mile.

Statement of sizes and lengths of pipe laid since the commencement of the work:

42-inch	25,630.70 feet.
36-inch	10,208.82 feet.
30-inch	61,410.07 feet.
24-inch	46,228.46 feet.
20-inch	9,626.59 feet.
16-inch	46,970.87 feet.
12-inch	128,231.03 feet.
10-inch	15,062.78 feet.
8-inch	318,723.34 feet.
6-inch	1,310,048.58 feet.
Total	1,972,141.24 feet.

or 373.511 + miles.

Water pipes were laid for the special water service for fire protection, as follows:

16-INCH.	
In Candace, Holden, Promenade, Smith, Stewart, and Spring streets	2,463.54 feet.
12-INCH.	
In Ashburton, Beach and Edith streets	692.43 feet.
8-INCH.	
In Beach, Edith and West Park streets	580.34 feet,
6-INCH.	
In West Park street	1.02 feet.
Total	3,737.33 feet.

or .707 + mile.

Statement of sizes and lengths of pipe laid for the special water service for fire protection since the commencement of the work:

24-inch	4,299.44 feet.
16-inch	37,517.52 feet.
12-inch	6,114.68 feet.
8-inch	580.34 feet.
6-inch	1.02 feet.
Total	48,513.00 feet.

or 9.188 + miles.

Five fire hydrants were set during the quarter, one in each of the following locations:

Daniel avenue, at northeast corner of Pocasset.
Hartford avenue, south side, on range of west line of King Philip street.
Hereford street, southeast corner of Clyde.
Pontiac street, east side, 350 feet south of Richfield avenue.
Rochambeau avenue, southeast side, 670 feet northeast of Blackstone boulevard.

The total number of fire hydrants, exclusive of those for special service for fire protection, is now two thousand o hundred and eighty — two thousand and thirty five flush a one hundred and forty-five post.

Two new fire hydrants were set during the quarter on special water service for fire protection, one in each of the following locations:

Ashburton street, east side, 47 feet northwest of Inez court.
Ashburton street, east side, 358 feet northwest of Inez court.

The total number of fire hydrants on the special water service for fire protection is one hundred and twenty-six.

During the quarter, two hundred and twenty water meters were set, of which number twenty-six were to replace other meters. The use of ten meters was discontinued.

The following meters were in use at the close of the quarter:

Kind.	Size.									Total.
	⅝-in.	¾-in.	1-in.	1½-in.	2-in.	3-in.	4-in.	6-in.	8-in.	
Ball & Fitts	1,367	275	64	8	2	.....	.....	.....	.....	1,716
Ball & Fitts, rotary	.....	.....	1	.....	.....	.....	1	.....	.....	2
Crown	10,091	1,413	412	188	61	36	34	1	.....	12,236
Empire	2,286	243	101	61	16	1	1	.....	.....	2,709
Fales, Jenks & Sons	.....	.....	1	.....	.....	.....	.....	.....	.....	1
Gem	.....	.....	.....	.....	20	38	21	5	.....	84
Hersey	59	.....	.....	.....	.....	.....	.....	3	.....	62
Nash	639	.....	.....	.....	.....	.....	.....	.....	.....	639
Thomson	5,192	420	74	53	21	7	7	1	.....	5,775
Trident	102	.....	1	.....	.....	.....	.....	.....	.....	103
Venturi	.....	.....	.....	.....	.....	.....	.....	.....	1	1
Worthington	174	.....	.....	.....	.....	.....	.....	.....	.....	174
	19,910	2,351	654	310	120	82	64	10	1	23,502

Eight plumber's licenses were issued during the quarter, making the total number one hundred and thirty-eight, all of which expire December 31, 1909.

Seven hundred and sixty-four permits to do plumbing work were issued during the quarter.

Two hundred and twenty-two applications for water were made during the quarter, making the total number twenty-nine thousand six hundred and seventy-eight.

The number of new service stops opened during the quarter was two hundred and eight.

The total number of service stops opened to June 30, 1909, inclusive, was twenty-eight thousand nine hundred and fifty-four. The number in actual use June 30, 1909, was twenty-six thousand six hundred and eighty-nine.

The amount of bills approved on account of water works from April 1 to June 30, 1909, inclusive, was:

For maintenance, ... $96,061 01

Classified as follows:

PETTACONSET PUMPING STATION.

Coal and wood	$5,063 98	
Firemen	914 76	
Sundries	852 53	
Cornish engine house	652 52	
Engineers	590 72	
Superintendence	442 00	
Real estate	237 79	
Care of grounds	206 22	
Oil, waste and packing	135 41	
Labor on fuel	75 18	
Barn expenses	62 60	
Allis-Chalmers high-duty engine	27 83	
Lights	14 56	
Repairs on boilers	7 56	
Horses, wagons, harnesses, etc	6 36	
		$9,290 02
Amount carried forward		$9,290 02

Amount brought forward		$9,250 02
Sand Filtration Plant.		
Installation	$12,771 19	
Cleaning beds	3,559 36	
Labor and supplies, pumping	1,832 91	
Laboratory — labor and supplies	595 72	
Miscellaneous supplies	180 28	
Repairs on filter beds	140 48	
Repairs on buildings	62 70	
		19,142 64
Sockanosset Reservoir.		
Sundries	$576 61	
Watchman	182 00	
		758 61
Hope Pumping Station.		
Engineers	$651 50	
Coal and wood	549 52	
Firemen	409 50	
Sundries	270 03	
New engine and boiler, to furnish and erect	76 47	
Lights	28 69	
Repairs on boilers	13 41	
Holly pumping engine	4 40	
		2,003 52
Hope Reservoir.		
Sundries	$409 85	
Watchman	204 75	
		614 60
Fruit Hill Reservoir.		
Sundries	$485 35	
Watchman	182 00	
		667 35
Meter Department.		
Water meters	$2,579 84	
Setting and repairing meters	1,511 04	
		4,090 88
Pipe Line and Service Stops.		
Repairs	$3,379 31	
Salaries of assistant engineers	2,080 25	
Superintendence — salaries	912 73	
Inspection of pipe line and services	865 74	
		7,238 03
Amount carried forward		$43,805 65

Amount brought forward		$43,805 65
Pipe Yard.		
Cast iron water pipe	$28,636 94	
Special water service for fire protection	6,541 38	
Laying water pipe	4,197 87	
Stop valves	3,251 00	
Fire hydrants, boxes and covers	2,108 80	
Laying service pipe	1,781 87	
Labor on and carting pipe	744 49	
Leading main from Sockanosset to city — to lay	576 00	
Tools	149 52	
Special castings	124 33	
Taps and stops	79 80	
Pipe yard, office expenses	21 80	
		48,213 80
Miscellaneous.		
Clerks' and inspectors' salaries	$1,969 63	
Barn expenses	700 92	
Horses, wagons, harnesses, etc	470 21	
Prevention of defilement of the Pawtuxet	300 00	
Car fares	200 00	
Sundries	157 10	
Telephone lines	153 93	
Public drinking fountains and troughs	89 77	
		4,041 56
		$96,061 01

The total expenditures to June 30, 1909, inclusive, was $11,943,358 83

The *net* expenditure for maintenance from April 1 to June 30, 1909, inclusive, was	$87,977 35
The *net* expenditure for maintenance to June 30, 1909, inclusive, was	$4,096,442 47

The value of the water works system January 1, 1909, as estimated by the city engineer, was as follows:

Pettaconset pumping station	$340,694 00	
Hope pumping station	112,151 77	
Sockanosset, Hope and Fruit Hill reservoirs	668,949 81	
Main lines and distribution pipes	2,855,152 25	
Real estate in Pawtuxet and Lincoln	15,975 00	
Tools and supplies	39,942 62	
		$4,032,865 4

Bills deposited with the city treasurer for collection from April 1 to June 30, 1909, inclusive, amounted to $87,307 11

As follows:

Water	$79,395 25	
Water meters	3,365 75	
Labor and material, laying services, etc	2,349 52	
Setting and repairing meters	1,765 21	
Rent of real estate	158 30	
One horse sold the highway department	125 00	
Penalties	72 00	
Removing snow from in front of voting booths	62 88	
Permanently closing service stops	10 00	
Empty oil barrels	3 20	
		$87,307 11

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of $85,473 65

As follows:

Water	$77,317 99	
Water meters	3,339 25	
Labor and material, laying services, etc	2,472 86	
Setting and repairing meters	1,912 17	
Rent of real estate	158 30	
One horse sold the highway department	125 00	
Penalties	72 00	
Removing snow from in front of voting booths	62 88	
Permanently closing service stops	10 00	
Empty oil barrels	3 20	
		$85,473 65

SEWERS.

Ten drain layer's licenses were issued during the quarter, all of which expire December 31, 1909.

During the quarter ending June 30, 1909, three hundred and five permits were issued to drain layers — one hundred and fifty-eight for new work and one hundred and forty-seven for extension and repair of drains.

April 5th, the proposal of the J. S. Packard Dredging Company to build and deliver a scow for use at the sewage precipitation plant for the sum of $17,704.00 was accepted and a contract subsequently executed.

April 27th, assessments for the cost of constructing sewers were certified to the city treasurer as follows:

Academy avenue, from a point about 90 feet north of Chalkstone to Molloy street	$1,811 25
Academy avenue, from Justice street to Whitford avenue, and in Molloy street and Academy avenue from Rowan street to Justice	8,363 15
Academy avenue, from Smith street to Whitford avenue	2,913 35
Elmgrove avenue, from Sessions street to Savoy and in Savoy from Elmgrove avenue to Morris	946 68
Blackstone boulevard, east side, from the north line of Margrave avenue to present end of sewer about 100 feet north of President avenue, and on the west side of Blackstone boulevard from Glen avenue to a point fifty feet north of Upton avenue	1,189 40
Langdon street from Hagan to Branch avenue	6,309 64
Boylston avenue, from Olney street to Montague	2,377 76
President avenue, from Cole to present end of sewer about 40 feet west of Wayland	2,678 30
Morris avenue, from Cypress street to Savoy	4,497 53
Congdon street, from a point 280 feet south of Jenckes to end of sewer in Congdon 20 feet north of Jenckes	1,403 30
Hugo street, from the city hospital to Douglas avenue	1,114 75
Curtis street, from Bosworth to Pelham, in Pelham street from Manton avenue to Aleppo street, and in Aleppo from Pelham 300 feet easterly	1,996 98
Fairmount avenue, from Mount Pleasant to Leah street, and in Leah from Fairmont avenue to Atwells	2,604 35
	$38,206 44

April 30th, the proposal of the F. W. Wait Lime Company to extend their contract for furnishing lime to the sewage precipitation plant for a period of one year to May 1, 1910, was accepted.

June 11th, contracts for furnishing the coal required for one year from July 1, 1909, were awarded and subsequently executed as follows:

For Ernest Street pumping station, 1,800 tons of New River, run of mine, at $3.35 per net ton delivered, to John R. White & Son.

For sewage precipitation tanks, 75 tons of New River lump at $3.45 per net ton delivered, to John R. White & Son., 65 tons of white ash egg at $5.75 per net ton delivered, to Eastern Coal Company.

For sewer maintenance department, New River at $3.60 per net ton for run of mine and $3.10 per net ton for lump taken at bidder's yard, to John R. White & Son., white ash stove and egg at $5.28 per net ton at bidder's yard, to Eastern Coal Company.

During the quarter, the construction of the following sewers was completed, namely:

No. of resolution.	Date of approval.		Date of completion.
365.	Sept. 19, 1908,	*Hanover street, from near Elmwood avenue to Bucklin street.*	April 29, 1909.
366.	" " "	*Hope street, from a point 200 feet southerly of Cypress to Larch, and from about 50 feet north of Larch to Savoy; also in Savoy street, from Hope to Morris avenue.*	June 28, 1909.
367.	" " "	*Larch street, from a point 75 feet west of Ivy to Camp, and from near Ivy easterly to Morris avenue.*	April 7, 1909.
403.	Oct. 19, 1908,	*Blackstone boulevard, west side, from Mount avenue to end of present sewer near Upton.*	April 15, 1909.
476.	Dec. 19, "	*Huron street, from near Wisdom avenue to Regent.*	June 2, 1909.
478.	" " "	*Union avenue, from a point 300 feet west of Webster to Webster.*	May 21, 1909.

No. of resolution.	Date of approval.		Date of completion.
108.	March 19, 1909,	*Fern street, from Berkley to Chalkstone avenue.*	June 11, 1909.

Work upon the following sewers was in progress at the close of the quarter, namely:

No. of resolution.	Date of approval.	
477.	December 19, 1908,	*Temple street, from a point about 100 feet north of Potter avenue to Public street.*
109.	March 19, 1909,	*Home avenue, from Chalkstone to Glover street.*
110.	" " "	*Hope street, from Hart to Rochambeau avenue.*
111.	" " "	*Ledge street, from Charles to Silver Spring, and in Silver Spring from Ledge to Northup avenue.*
114.	" " "	*Saratoga street, from a point about 95 feet east of Broad to Baxter.*

Work upon the following sewers, completing the work ordered by the city council, had not commenced June 30, 1909, namely:

No. of resolution.	Date of approval.	
112.	Mar. 19, 1909,	*Lena street, from Judith to Latham, and in Latham, from Lena to Plainfield.*
113.	" " "	*Oakland avenue, from Smith street to Eaton.*
202.	May 21, "	*Baxter street, from Norwich avenue to Massie, and in Wesleyan avenue from present end of sewer to Elmwood avenue.*

No. of resolution.	Date of approval.	
203.	May 21, 1909,	*Dewey street, from near Laban to Eastwood avenue, and in Harvest street, from a point about 95 feet east of River avenue to Robin street.*
204.	" " "	*Ohio avenue, from Virginia to Eddy street.*
205.	" " "	*Sixth street, from a point about 140 feet west of Hope to Summit avenue, and in Poplar street, from a point about 90 feet east of Hope to Morris avenue.*

The amount of bills approved on account of sewers from April 1 to June 30, 1909, inclusive, was:

For construction, ... $38,835 73

Charged as follows:

Material	$10,078 64
Contract reservations	1,087 00
Additional catch-basins	507 54
Sundries	253 90
Testing cement	231 94
Tools	104 59
Building scow for residue disposal	11,822 24
Sewer in Blackstone boulevard, west side, from Mount avenue to end of present sewer near Upton	226 40
Sewer in Congdon street, from a point 280 feet south of Jenckes to end of sewer north of Jenckes	208 40
Sewer in Fern street, from Berkley to Chalkstone avenue	383 21
Sewer in Hanover street, from near Elmwood avenue to Bucklin street	852 05
Amount carried forward	$25,755 91

Amount brought forward	$25,755 91
Sewer in Home avenue from Chalkstone to Glover street	743 88
Sewer in Hope and Savoy streets	3,530 72
Sewer in Hope street, from Hart to Rochambeau avenue	2,421 55
Sewer in Hugo street, from the city hospital land to Douglas avenue	9 18
Sewer in Huron street, from near Wisdom avenue to Regent	309 88
Sewer in Larch street, from 75 feet west of Ivy to Camp, and from near Ivy to Morris avenue	97 16
Sewer in Ledge and Silver Spring streets	3,074 75
Sewer in Morris avenue, from Cypress street to Savoy	1,808 52
Sewer in Saratoga street, from near Broad to Baxter	25 90
Sewer in Temple street, from near Potter avenue to Public street	432 03
Sewer in Union avenue, from a point 300 feet west of Webster to Webster	626 25
	$38,835 73

For maintenance. $30,727 00

Classified as follows:

Cleaning basins and sewers	$5,572 13
Repairing basins and sewers	3,483 23
Cleaning and repairing old drains	954 36
Horses, wagons, harnesses, etc	816 32
Inspection of connections	728 00
Sundries	465 69
Barn expenses	458 64
Salary, superintendent	442 00
Tools	316 01
Telephone lines	43 93
Carpenter shop	38 84
Repairs on gate houses	32 46
Office expenses	32 07
Car fares	20 00
Cleaning private connections	15 12

ERNEST STREET STATION.

Coal and wood	$1,589 76
Engineers	864 32
Cleaning screens	669 94
Firemen	575 04
Amount carried forward	$17,117 86

Amount brought forward	$17,117 86
Cleaning and repairing pumps	547 89
Care of grounds	272 18
Repairs on buildings	61 79
Supplies	35 47
Repairs on engines	30 50
Lights	25 41
Care of buildings	13 79

SEWAGE PRECIPITATION TANKS.

Chemicals	$5,021 23
Labor in sludge disposal	4,583 68
Labor on sewage precipitation	1,406 04
Miscellaneous supplies	648 73
Electrical power	595 00
Repairs on machinery	276 86
Fuel	77 79
Lights	12 78
	$30,727 00

The *net* expenditure for construction of sewers to June 30, 1909, inclusive, was $8,225,062 99

The *net* expenditure for maintenance of sewers to June 30, 1909, inclusive, was $1,707,072 67

Bills deposited with the city treasurer for collection from April 1 to June 30, 1909, inclusive, amounted to $773 93

As follows:

Extinguishing fire at dump	$267 48
Miscellaneous work	104 86
Sale of old hose and rope	87 54
Cleaning private connections	25 25
Electrical power furnished at carpenter shop	25 11
Sewer material	230 29
Laying drains to curbstone	23 00
Removing surplus material	10 40
	$773 93

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of $512 95

As follows:

Miscellaneous work	$102 86
Sale of old hose and rope	87 54
Cleaning private connections	33 75
Electrical power furnished at carpenter shop	25 11
Sewer material	230 29
Laying drains to curbstone	23 00
Removing surplus material	10 40
	$512 95

HIGHWAYS.

Three permits to open streets were issued during the quarter.

May 6th, the proposal of Frederick E. Shaw to excavate the material above sub-grade in Ledge street, between Charles and Windmill, for the sum of twenty cents per cubic yard, was accepted.

June 11th, the proposal of the Connecticut Trap Rock Quarries to furnish and deliver in the city yard 300 tons of crushed stone at $1.25 per ton, was accepted.

Contracts for furnishing the coal required for one year from July 1, 1909, were awarded and subsequently executed as follows:

To John R. White & Son, New River, run of mine, at $3.00 per net ton at bidder's yard.

To John R. White & Son, lump, at $3.10 per net ton at bidder's yard.

To Eastern Coal Company, Georges Creek, at $3.35 per net ton at bidder's yard.

To Eastern Coal Company, White ash, egg and stove, at $5.28 per net ton at bidder's yard.

June 18th, a statement of the cost of concreting sidewalks in sundry streets, with ten per centum added to cover the cost of assessing and collecting, was certified to the assessors of taxes, amounting to $2,147.35.

June 20th, the proposal of Frank Slavin to haul screened gravel to Niantic avenue for the sum of $1.00 per cubic yard, measured on the street, was accepted.

During the quarter, the following work was completed.

SIDEWALKS CURBED AND GUTTERS PAVED.

Date of order.	
November 19, 1908,	*Hammond street, east side, from Cranston to Durfee.*
March 18, 1909,	*Lenox avenue, from Hamilton street to Emerson.*
" " "	*Hanover street, from Elmwood avenue to Dexter street.*

The following work was in progress June 30, 1909.

SIDEWALKS CURBED AND GUTTERS PAVED.

Date of order.	
May 20, 1909,	*Larch street, from Camp to Morris avenue.*

The following work, ordered by the board of aldermen and city council, had not commenced June 30, 1909, namely:

SIDEWALKS CURBED AND GUTTERS PAVED.

Date of order.	
March 18, 1909,	*Home avenue, from Chalkstone to Glover street.*
" " "	*Oakland avenue, from Eaton street to Smith.*
" " "	*Saratoga street, from Broad to Baxter.*
" " "	*Huron street, from Wisdom avenue to Regent.*
" " "	*Fern street, from Chalkstone avenue to Berkley street.*
" " "	*Temple street, from Public to Potter avenue.*
May 20, "	*Ledge street, from Charles to Silver Spring.*
" " "	*Baxter street, from Norwich avenue to Massie.*

Date of order.			
June	17,	1909,	*Poplar street, from Hope to Morris avenue.*
"	"	"	*Harvest street, from River avenue to Robin street.*
"	"	"	*Sixth street, from Summit avenue to Hope street.*

REBUILD.

June	8,	1909,	*Easterly portion of Exchange place between Exchange street and the bridge over the river.*

Bills approved on account of highways from April 1 to June 30, 1909, inclusive, amounted to:

Regular appropriation, ... $86,281 05

Classified as follows:

Cleaning streets	$22,416 86	
Repairs on unpaved streets	18,804 24	
Repairs on paved streets	15,300 92	
Crushed stone — material and labor	5,121 99	
Removing stone crusher to Northup avenue	3,040 43	
Blacksmith and wheelwright shop	2,678 80	
Barn expenses	2,620 37	
Watering streets	1,504 60	
Horses, wagons, harnesses, etc	1,475 12	
Stone — paving and crosswalk	1,378 32	
Tools, implements, etc	957 29	
Repairs on stone crushers	628 31	
Labor on material	620 03	
Steam rollers — repairs and supplies	594 40	
Screening gravel	516 33	
Superintendent's salary	442 00	
Fencing streets — material and labor	205 59	
Watchman at city yard	182 00	
Sundries	171 13	
Building driveways, etc	108 56	
Office expenses, city yard	95 85	
Car fares	30 00	
Telephone lines	5 60	
Repairs on buildings, highway yard	75	
Amount carried forward		$78,899 49

Amount brought forward		$78,899 49

New Work — Building and Rebuilding Streets, Etc.

Sidewalks Curbed and Gutters Paved.

Hammond street, east side, from Cranston to Durfee.	$86 70	
Hanover street, from Elmwood avenue to Dexter street	2,242 68	
Larch street, from Camp to Morris avenue	2,927 69	
Lenox avenue, from Hamilton street to Emerson	2,124 49	
		7,381 56
		$86,281 05

Bills deposited with the city treasurer for collection from April 1 to June 30, 1909, inclusive, amounted to - $19,225 74

As follows:

Rentals for use of public highways	$12,750 84
Labor and material	4,711 35
Blacksmith and harness work for other departments	707 63
One horse sold the treasury department	325 00
Street sweepings	248 15
Boarding horses for other departments	245 74
Building driveways, etc.	93 46
Manure from barn	76 00
Use of hoisting engine	60 37
Empty oil barrels	7 20
	$19,225 74

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of $14,696 58

As follows:

Rentals for use of public highways	$11,560 50
Labor and material	1,546 52
Blacksmith and harness work for other departments	883 14
Boarding horses for other departments	245 74
Amount carried forward	$14,235 90

Amount brought forward	$14,235 90
Street sweepings	243 15
Manure from barn	76 00
Building driveways, etc	73 96
Use of hoisting engine	60 37
Empty oil barrels	7 20
	$14,696 58

SIDEWALKS AND CURBING.

Bills approved on account of sidewalks and curbing from April 1 to June 30, 1909, inclusive, amounted to . . . $6,711 15

Charged as follows:

Granite curbing	$3,195 79
Repairing sidewalks and gutters	1,849 97
Concreting sidewalks	1,665 39
	$6,711 15

Bills deposited with the city treasurer for collection from April 1 to June 30, 1909, inclusive, amounted to $150 57

As follows:

Granite curbing	$143 49
Concreting sidewalks	7 08
	$150 57

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of $2,053 18

As follows:

Curbing bills	$1,953 44
Granite curbing	92 66
Concreting sidewalks	7 08
	$2,053 18

CITY ENGINEER.

Bills approved on account of the city engineer's department from April 1 to June 30, 1909, inclusive, amounted to . $10,082 02

Charged as follows:

Salary — city engineer	$1,125 00
Salaries of assistants	7,625 83
Salaries of clerks	894 40
Car fares	204 85
Supplies, drawing material, etc	190 15
Telephone lines	35 68
Carriage hire	4 20
Sundries	1 61
Instruments and repairs	30
	$10,082 02

BRIDGES.

April 30th, the proposal of Dailey Brothers to furnish and drive twenty piles at Red Bridge for the sum of $14.90 each, was accepted.

June 11th, the proposal of the Eastern Coal Company to furnish and deliver the coal required for one year from July 1, 1909, was accepted and a contract executed, as follows:

100 tons of New River lump at $3.70 per net ton.
7 tons of white ash egg at $5.75 per net ton.

Bills approved on account of bridges from April 1 to June 30, 1909, inclusive, amounted to $6,898 97

Atwells avenue bridge	$ 67
Barn expenses	100 17
Branch avenue culvert	2 91
Car fares	25 00
Amount carried forward	$128 75

Amount brought forward	$128 75
Cemetery street bridge	7 56
Charles street railroad bridge	4 05
Crawford street bridge	140 64
Eagle street bridge	2 01
Gaspee street bridge	93 48
Hawkins street bridge	13 08
Horses, wagons, harnesses, etc	9 80
Lumber, hardware, etc	194 40
Manton avenue bridge	166 21
Mill street bridge	43 41
Nash lane bridge	5 81
Park street bridge	21 83
Point street bridge	1,139 48
Post office bridge	3 85
Promenade street bridge	22 55
Red bridge	687 07
Rent of keeper's house—Washington bridge	36 00
Salaries—Point street bridge	1,069 25
Salaries—Red bridge	564 85
Salaries—Washington bridge	574 85
Sundries	144 83
Telephone lines	2 68
Tools	109 75
Valley street bridge—north span	3 92
Veazie street bridge	59 95
Wanskuck bridge	68
Wanskuck bridge—to rebuild	1,335 44
Washington bridge	142 48
Washington row bridge	43 67
Weybosset bridge	126 64
	$6,898 97

Bills approved for account of building the river walls between the Burnside and Exchange bridges, from April 1 to June 30, 1909, inclusive have been paid from the special appropriation for that work to the amount of $4,136 10

Bills deposited with the city treasurer for collection (for sale of old lumber), from April 1 to June 30, 1909 inclusive, amounted to $3 00

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of $36 90

As follows:

Repairs on gate post, Point street bridge	$33 90
Sale of old lumber	3 00
	$36 90

PUBLIC LIGHTS.

Bills approved on account of the public lights from April 1 to June 30, 1909, inclusive, amounted to $69,785 53

Charged as follows:

Arc lights	$49,395 63
Incandescent lights	14,070 70
Welsbach lights	6,270 25
Salaries	42 00
Setting and removing gas posts	6 95
	$69,785 53

Bills deposited with the city treasurer for collection from April 1 to June 30, 1909, inclusive, amounted to $30 00

As follows:

Removing gas posts	$24 00
Relocating gas post	6 00
	$30 00

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of $30 00

As follows:

Removing gas posts	$24 00
Relocating gas post	6 00
	$30 00

PUBLIC WORKS OFFICE.

Bills approved on account of the public works office from April 1 to June 30, 1909, inclusive, amounted to $5,494 43

Charged as follows:

Salaries of commissioner and secretary	$1,925 00
Salaries of office assistants	3,274 46
Office supplies	264 79
Telephone lines	30 18
	$5,494 43

FORESTRY.

Bills approved on account of the forestry department from April 1 to June 30, 1909, inclusive, amounted to $1,270 05

Charged as follows:

Salary, city forester	$364 00
Trimming, repairing and removing trees and shrubs	813 16
Tools and supplies	87 51
Horses, wagons, harnesses, etc	5 38
	$1,270 05

Bills deposited with the city treasurer for collection (for supervising trimming trees), from April 1 to June 30, 1909, inclusive, amounted to $4 73

During the quarter, coupons from bills collected (for supervising trimming trees), have been returned by the city treasurer, and receipted for to the amount of . . $4 73

WALTER F. SLADE,

Commissioner.

(19A) CITY DOCUMENT. [No.

ONE HUNDRED AND SEVENTH QUARTERLY REPORT

OF THE

Department of Public Works

OF THE

CITY OF PROVIDENCE, R. I.

QUARTER ENDING SEPTEMBER 30, 1909.

The Providence Press
Snow & Farnham Co., City Printers,
21 Westminster Street.
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63 Washington Street.
1909.

REPORT.

OFFICE OF THE DEPARTMENT OF PUBLIC WORKS,
CITY HALL, PROVIDENCE, R. I., October 1, 1909.

TO THE HONORABLE THE CITY COUNCIL:

In compliance with the requirements of Chapter 41 of the ordinances, the Commissioner of Public Works respectfully presents the one hundred and seventh quarterly report of the expenditures by the several departments under his direction and control, with statements of work ordered and the condition and cost of same, for the quarter ending September 30, 1909.

WATER WORKS.

August 28th, a contract for furnishing a ten million gallon Worthington horizontal high-duty pumping engine at Hope station for the sum of $24,000.00 was awarded to Henry R. Worthington, of New York, and subsequently executed.

The average daily consumption of water during the quarter ending September 30, 1909, was 16,234,042 gallons.

Water pipes were laid during the quarter as follows:

16-INCH.	
In Elm and Plain streets	**1,809.10 feet.**
12-INCH.	
In Branch avenue	**45.22 feet.**
8-INCH.	
In Bosworth and Elm streets, Brightwood, Branch and Roger Williams avenues; and in Bucklin avenue in the town of Johnston	**568.93 feet**

6-INCH.

In Curtis, Coggeshall, Elm, Fisk, Harvest, Hoppin, Manning, Point, Poplar, Simmons and Wallace streets; Glendale, Pavilion, Pomona, and Wyndham avenues; in Auburn, Clemence, Garden, Richard and Smith streets; Bartlett, Laurel Hill, Lee, Villa and Williams avenues in the town of Cranston; in Osgood and Springfield avenues in the town of Johnston; in Glover and Second streets; Allen and Whipple avenues in the town of North Providence	7,386.03 feet.
Total	9,809.28 feet.

or 1.857 + miles.

Water pipes were removed during the quarter as follows

10-INCH.

From Plain street	7.79 feet.

8-INCH.

From Elm street	1,801 31 feet.

6-INCH.

From Elm street and Branch avenue	60.74 feet.
Total	1,869.84 feet.

or .354 + mile.

Statement of sizes and lengths of pipe laid since the commencement of the work:

42-inch	25,630.70 feet.
36-inch	10,208.82 feet.
30-inch	61,410.07 feet.
24-inch	46,228.46 feet.
20-inch	9,626.59 feet
16-inch	48,779.97 feet.
12-inch	128,276.25 feet.
10-inch	15,054 99 feet.
8-inch	317,490.96 feet.
6-inch	1,317,373.87 feet.
Total	1,980,080.68 feet.

or 375.015 + miles.

Water pipes were laid for the special water service for fire protection during the quarter as follows:

16-INCH.

In Candace, Pond, Smith, Spring and Stewart streets	2,981.06 feet.

8-INCH.	
In Pelham street.,.....	44 84 feet.
Total.....	3,025.90 feet.

or .573 + milė.

Statement of sizes and lengths of pipe laid for the special water service for fire protection since the commencement of the work:

24-inch	4,299.44 feet.
16-inch	40,498.58 feet.
12-inch	6,114.68 feet.
8-inch	625.18 feet.
6-inch	1.02 feet.
Total.....	51,538.90 feet.

or 9.761 + miles.

Nine fire hydrants were set during the quarter, one in each of the following locations:

Bucklin street, at northeast corner of Redwing.
Carolina avenue, north side, 135 feet east of Tennessee.
Cumerford street, east side, 1 foot north of Polly.
Edison avenue, east side, 8 feet south of President.
Lenox avenue, north side, 205.5 feet east of Elmwood.
Lenox avenue, north side, 251 feet east of Melrose street.
Lexington avenue, north side, 405 feet west of Melrose street.
Mitchell street, north side, 307 feet east of Melrose.
Rutherglen avenue, north side, 394 feet west of Narragansett.

The total number of fire hydrants, exclusive of those for special service for fire protection, is now two thousand one hundred and eighty nine — two thousand and forty-four flush and one hundred and forty-five post.

Eleven new fire hydrants were set during the quarter on the special water service for fire protection, one in each of the following locations:

Beach street, north side, 156 feet east of Holden.
Candace street, west side, 39 feet north of Orms.
Edith street, northeast side, 15 feet southeast of Calais.

Edith street, north side, 117 feet east of Leland.
Holden street, southwest corner of Edith.
Holden street, west side, 12 feet north of Promenade.
Pond street, south side, 10 feet west of Stewart.
Pond street, south side, 7.5 feet east of Spring.
Pond street, south side, 88.5 feet east of Summer.
Promenade street, north side, 8.5 feet east of Leland.
Promenade street, north side, 286 feet east of Holden.

The total number of fire hydrants on the special water service for fire protection is one hundred and thirty-seven.

During the quarter, two hundred and seventy-four water meters were set, of which number thirty-two were to replace other meters. The use of eight meters was discontinued.

The following meters were in use at the close of the quarter:

Kind.	Size.									Total.
	⅝-in.	¾-in.	1-in.	1½-in.	2-in.	3-in.	4-in.	6-in.	8-in.	
Ball & Fitts	1,348	271	63	8	2	.....	.....	.....	.....	1,692
Ball & Fitts, rotary	.....	.....	1	.....	.....	.....	1	.....	.....	2
Crown	10,121	1,424	419	192	68	38	34	1	.....	12,297
Empire	2,392	249	100	62	17	1	1	.....	.....	2,822
Fales, Jenks & Sons	.....	.....	1	.....	.....	.....	.....	.....	.....	1
Gem	.....	.....	.....	.....	22	39	21	5	.....	87
Hersey	60	.....	.....	.....	.....	.....	.....	6	.....	66
Nash	642	.....	.....	.....	.....	.....	.....	.....	.....	642
Thomson	5,200	419	74	53	21	7	7	1	.....	5,782
Trident	102	.....	1	.....	.....	.....	.....	.....	.....	103
Venturi	.....	.....	.....	.....	.....	.....	.....	.....	1	1
Worthington	241	.....	.....	.....	.....	.....	.....	.....	.....	241
	20,106	2,363	659	315	130	85	64	13	1	23,736

Three plumber's licenses were issued during the quarter, making the total number one hundred and forty-one, all of which expire December 31, 1909.

Eight hundred and five permits to do plumbing work were issued during the quarter.

Two hundred and forty-seven applications for water were made during the quarter, making the total number twenty-nine thousand nine hundred and twenty-five.

The number of new service stops opened during the quarter was two hundred and thirty-seven.

The total number of service stops opened to September 30, 1909, inclusive, was twenty-nine thousand one hundred and ninety-one. The number in actual use September 30, 1909, was twenty-six thousand nine hundred and fifty-nine.

The amount of bills approved on account of water works from July 1 to September 30, 1909, inclusive, was:

For maintenance, ... $77,302 49

Classified as follows:

PETTACONSET PUMPING STATION.

Coal and wood	$4,669 48	
Sundries	992 55	
Firemen	950 67	
Engineers	639 78	
Superintendence	461 43	
Oil, waste and packing	220 35	
Care of grounds	149 31	
Allis-Chalmers high-duty engine	119 88	
Labor on fuel	80 64	
Lights	79 05	
Barn expenses	78 77	
Repairs on boilers	70 94	
Cornish engine house	69 98	
Real estate	34 56	
Corliss pumping engine and house	26 88	
Horses, wagons, harnesses, etc	12 06	
		$8,656 33
Amount carried forward		$8,656 33

Amount brought forward		$8,656 33
Sand Filtration Plant.		
Installation	$14,865 03	
Cleaning beds	2,816 05	
Labor and supplies, pumping	1,984 94	
Laboratory — labor and supplies	643 09	
Miscellaneous supplies	306 41	
Repairs on filter beds	80 79	
Repairs on buildings	48	
		20,696 79
Sockanosset Reservoir.		
Sundries	$193 80	
Watchman	192 00	
		385 80
Hope Pumping Station.		
Coal and wood	$1,526 64	
Engineers	677 93	
Firemen	432 00	
New engine and boiler, to furnish and erect	331 02	
Sundries	46 90	
Lights	28 88	
Holly pumping engine	21 87	
Repairs on boilers	2 25	
		3,067 49
Hope Reservoir.		
Watchman	$213 75	
Sundries	194 78	
		408 53
Fruit Hill Reservoir.		
Sundries	$1,046 64	
Watchman	197 25	
		1,243 89
Meter Department.		
Water meters	$4,916 61	
Setting and repairing meters	1,666 45	
		6,583 06
Pipe Line and Service Stops.		
Repairs	$4,732 26	
Salaries of assistant engineers	2,273 88	
Inspection of pipe line and services	969 84	
Superintendence — salaries	952 85	
		8,928 83
Amount carried forward		$49,970 72

Amount brought forward		$49,970 72
Pipe Yard.		
Laying water pipe	$7,727 65	
Cast iron water pipe	4,330 82	
Special water service for fire protection	4,176 65	
Leading main from Sockanosset to city — to lay	2,190 74	
Laying service pipe	1,927 16	
Special castings	1,278 91	
Labor on and carting pipe	302 97	
Tools	259 96	
Fire hydrants, boxes and covers	57 61	
Laying 42-inch force main from Pettaconset to Sockanosset	20 00	
Pipe yard, office expenses	7 92	
		22,280 39
Miscellaneous.		
Clerks' and inspectors' salaries	$2,069 07	
Public drinking fountains and troughs	912 48	
Barn expenses	761 19	
Sundries	493 63	
Prevention of defilement of the Pawtuxet	304 15	
Horses, wagons, harnesses, etc	211 03	
Car fares	150 00	
Telephone lines	106 29	
Real estate in Lincoln	35 00	
Inspection of water pipe with reference to electrolysis	8 54	
		5,051 38
		$77,302 49

The total expenditures to September 30, 1909, inclusive, was $12,020,661 32

The *net* expenditure for maintenance from July 1 to September 30, 1909, inclusive, was $69,468 73

The *net* expenditure for maintenance to September 30, 1909, inclusive, was $4,165,911 20

The value of the water works system January 1, 1909, as estimated by the city engineer, was as follows:

Pettaconset pumping station	$340,694 00	
Hope pumping station	112,151 77	
Sockanosset, Hope and Fruit Hill reservoirs	668,949 81	
Main lines and distribution pipes	2,855,152 25	
Real estate in Pawtuxet and Lincoln	15,975 00	
Tools and supplies	39,942 62	
		$4,032,865 45

Bills deposited with the city treasurer for collection from July 1 to September 30, 1909, inclusive, amounted to $90,379 61

As follows:

Water	$81,689 79
Water meters	4,653 75
Setting and repairing meters	2,089 32
Labor and material, laying services, etc	1,786 35
Rent of real estate	100 50
Penalties	48 00
Permanently closing service stops	5 00
Repairs on pipe line	4 50
Empty oil barrels	2 40
	$90,379 61

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of $85,362 70

As follows:

Water	$77,480 94
Water meters	4,614 75
Setting and repairing meters	1,659 44
Labor and material, laying services, etc	1,397 02
Rent of real estate	122 25
Penalties	48 00
Repairs on pipe line	32 90
Permanently closing service stops	5 00
Empty oil barrels	2 40
	$85,362 70

The amount of bills approved on account of water works for the fiscal year ending September 30, 1909, inclusive, was:

For maintenance, ... $374,437 75

Classified as follows:

PETTACONSET PUMPING STATION.

Coal and wood	$22,867 56
Firemen	3,643 29
Amount carried forward	$26,510 85

Amount brought forward	$26,510 85	
Sundries	3,531 69	
Engineers	2,403 38	
Superintendence	1,772 86	
Oil, waste and packing	768 40	
Cornish engine house	746 56	
Care of grounds	685 02	
Barn expenses	359 25	
Repairs on boilers	342 01	
Labor on fuel	306 15	
Real estate	276 55	
Allis-Chalmers high-duty engine	254 07	
Lights	128 17	
Horses, wagons, harnesses, etc	30 62	
Corliss pumping engine and house	26 88	
		$38,142 49

SAND FILTRATION PLANT.

Installation	$106,728 80	
Cleaning beds	11,391 71	
Labor and supplies, pumping	8,264 93	
Laboratory labor and supplies	2,338 91	
Miscellaneous supplies	880 34	
Repairs on filter beds	221 27	
Repairs on buildings	91 68	
		129,917 64

SOCKANOSSET RESERVOIR.

Sundries	$1,447 42	
Watchman	732 00	
		2,179 42

HOPE PUMPING STATION.

Engineers	$2,607 36	
Coal and wood	2,373 15	
Firemen	1,642 50	
Sundries	1,491 10	
New engine and boiler, to furnish and erect	1,236 40	
Repairs on boilers	620 15	
Lights	194 56	
Oil, waste and packing	49 30	
Holly pumping engine	26 27	
		10,240 79

HOPE RESERVOIR.

Sundries	$1,598 23	
Watchman	855 75	
		2,453 98
Amount carried forward		$182,934 32

Amount brought forward		$182,934 32
Fruit Hill Reservoir.		
Sundries	$2,755 75	
Watchman	737 25	
		3,493 00
Meter Department.		
Water meters	$14,511 02	
Setting and repairing meters	6,634 21	
		21,145 23
Pipe Line and Service Stops.		
Repairs	$17,171 62	
Salaries of assistant engineers	8,453 39	
Inspection of pipe line and services	6,512 73	
Superintendence—salaries	3,661 25	
		35,798 99
Pipe Yard.		
Cast iron water pipe	$33,000 61	
Laying water pipe	21,262 29	
Special water service for fire protection	12,020 81	
Fire hydrants, boxes and covers	8,123 52	
Laying service pipe	7,021 28	
Special castings	4,363 67	
Stop valves	3,368 76	
Leading main from Sockanosset to city—to lay	2,766 74	
Service pipe	2,426 47	
Pig lead and tin	2,091 62	
Taps and stops	1,444 28	
Labor on and carting pipe	1,258 16	
Tools	849 08	
Pipe yard, office expenses	204 31	
Laying 42-inch force main from Pettaconset to Sockanosset	20 00	
Repairs on pipe yard buildings	58	
		100,222 18
Miscellaneous.		
Town of Cranston tax	$9,616 62	
Clerks' and inspectors' salaries	7,592 16	
Town of Warwick tax	4,344 00	
Barn expenses	2,970 13	
Prevention of defilement of the Pawtuxet	1,204 15	
Public drinking fountains and troughs	1,144 16	
Horses, wagons, harnesses, etc	1,039 75	
Sundries	653 46	
Car fares	650 00	
Inspection of water pipe with reference to electrolysis	609 38	
Amounts carried forward	$29,823 81	$343,593 72

Amounts brought forward	$29,823 81	$343,593 72
Telephone lines	568 08	
Town of North Providence tax	400 00	
Real estate in Lincoln	35 00	
Analysis of water	17 14	
		30,844 03
		$374.437 75

SEWERS.

Three drain layer's licenses were issued during the quarter, making the total number one hundred and fifty-four, all of which expire December 31, 1909.

During the quarter ending September 30, 1909, three hundred and twenty-six permits were issued to drain layers, — one hundred and sixty-three for new work and one hundred and sixty-three for extensions and repairs of drains.

July 26th, the proposal of William M. Harris, Jr., to furnish and deliver in the city yard 500,000 hard body "W." bricks at $7.25 per M., was accepted and a contract subsequently executed.

September 21st, the proposal of the New England Steam Brick Company, to furnish about 1,200,000 Barrington bricks and deliver same alongside the work, wherever they can be hauled by teams, for the sum of $11.37 per M., was accepted.

During the quarter, contracts for the construction of sewers were awarded to the following parties and subsequently executed, namely:

[The amounts given below are what are estimated will be paid the contractors for labor, and do not include the cost of inspection and materials.]

To Charles Crankshaw.

No. of resolution.	Date of approval.		
275.	July 2, 1909,	*Cumerford street, from Wallace to Union avenue.*	$1,112 95

No. of resolution.	Date of approval.		
313.	Sept. 17, 1909,	*Darling street, from near Corliss to West River.* .	$432 80
314.	" " "	*Somerset street, from Prairie avenue to Gay street and in Gay street from Somerset to Dudley.*	4,035 90

To Frederick E. Shaw.

202.	May 21, 1909,	*Baxter street, from Norwich avenue to Massie, and in Wesleyan avenue, from present end of sewer to Elmwood.* . .	$780 40
203.	" " "	*Dewey street, from near Laban to Eastwood avenue, and in Harvest street, from a point about 95 feet east of River avenue to Robin street.* .	517 40
204.	" " "	*Ohio avenue, from Virginia to Eddy street.* .	889 90
205.	" " "	*Sixth street, from a point about 140 feet west of Hope to Summit avenue, and in Poplar street, from a point about 90 feet east of Hope to Morris avenue.* . . .	3,353 19
274.	July 2, "	*Forest street, from Ivy to Hope.*	1,127 98
276.	" " "	*Sumter street, from Emerson to Hamilton, and in Richardson street, from near Ocean to Rugby.* .	1,403 60

TO PETTACONSET CONSTRUCTION CO.

No. of resolution.	Date of approval.		
277.	July 2, 1909,	*Woonasquatucket District, Section 32* . . .	$163,818 36

During the quarter, the construction of the following sewers was completed, namely:

No. of resolution.	Date of approval.		Date of completion.
477.	Dec. 19, 1908,	*Temple street, from a point about 100 feet north of Potter avenue to Public street.* . .	July 1, 1909.
110.	Mar. 19, 1909,	*Hope street, from Hart to Rochambeau avenue.*	July 24, "
113.	" " "	*Oakland avenue, from Smith street to Eaton.*	Aug. 31, "
114.	" " "	*Saratoga street, from a point about 95 feet east of Broad to Baxter.* .	July 10, "
202.	May 21, "	*Baxter Street, from Norwich avenue to Massie, and in Wesleyan avenue, from present end of sewer to Elmwood.* . .	Aug. 4, "
203.	" " "	*Dewey street, from near Laban to Eastwood avenue, and in Harvest street, from a point about 95 feet east of River avenue to Robin street.* . .	Sept. 17, "
204.	" " "	*Ohio avenue, from Virginia to Eddy street.*	Sept. 13, "

No. of resolution.	Date of approval.		Date of completion.
205.	May 21, 1909,	*Sixth street, from a point about 140 feet west of Hope to Summit avenue, and in Poplar street, from a point about 90 feet east of Hope to Morris avenue.*	Sept. 20, 1909.

Work upon the following sewers was in progress at the close of the quarter, namely:

No. of resolution.	Date of approval.	
111.	Mar. 19, 1909,	*Ledge street, from Charles to Silver Spring, and in Silver Spring, from Ledge to Northup avenue.*
112.	" " "	*Lena street, from Judith to Latham, and in Latham, from Lena to Plainfield.*
274.	July 2, "	*Forest street, from Ivy to Hope.*
275.	" " "	*Cumerford street, from Wallace to Union avenue.*
276.	" " "	*Sumter street, from Emerson to Hamilton, and in Richardson street, from near Ocean to Rugby.*
277.	" " "	*Woonasquatucket District, Section 32, improved sewerage system.*

Work upon the following sewers, completing the work ordered by the city council, had not commenced September 30. 1909, namely:

No. of resolution.	Date of approval.	
313.	Sept. 17, 1909,	*Darling street, from near Corliss to West River.*
314.	" " "	*Somerset street, from Prairie avenue to Gay street, and in Gay street, from Somerset to Dudley.*
316.	" " "	*Kinsley avenue, from Gaspee street to Eagle.*

The amount of bills approved on account of sewers from July 1 to September 30, 1909, inclusive, was:

For construction, ... $28,013 37

Charged as follows:

Material	$5,584 63
Additional catch-basins	405 58
Sundries	364 40
Testing cement	220 03
Tools	97 59
Building scow for residue disposal	408 82
Sewer in Baxter street and Wesleyan avenue	1,002 20
Sewer in Cumerford street, from Wallace to Union avenue	556 64
Sewer in Curtis, Pelham and Aleppo streets	576 27
Sewer in Dewey and Harvest streets	584 12
Sewer in Fern street, from Berkley to Chalkstone avenue	13 00
Sewer in Forest street, from Ivy to Hope	97 19
Sewer in Hanover street, from near Elmwood avenue to Bucklin street	14 78
Sewer in Home avenue, from Chalkstone to Glover street	374 57
Sewer in Hope street, from Hart to Rochambeau avenue	2,733 03
Sewer in Hope and Savoy streets	1,597 9[illegible]
Sewer in Huron street, from near Wisdom avenue to Regent	5 95
Sewer in Ledge and Silver Spring streets	4,565 68
Sewer in Lena and Latham streets	98 19
Sewer in Oakland avenue, from Smith street to Eaton	2,181 44
Sewer in Ohio avenue, from Virginia to Eddy street	1,111 09
Sewer in Ormsbee avenue, from angle at railroad to Lock street	496 93
Sewer in Saratoga street, from near Broad to Baxter	457 56
Sewer in Sixth and Poplar streets	4,047 58
Sewer in Sumter and Richardson streets	181 49
Sewer in Temple street, from near Potter avenue to Public street	19 45
Sewer in Union avenue, from a point 300 feet west of Webster avenue to Webster	5 10
Sewer in Woonasquatucket District, Section 32, Division 1	111 30
Sewer in Woonasquatucket District, Section 32, Division 2	100 80
	$28,013 37

For maintenance. $33,843 60

Classified as follows:

Cleaning basins and sewers	$7,191 54
Repairing basins and sewers	3,225 10
Cleaning and repairing old drains	1,162 81
Inspection of connections	755 14
Tools	716 32
Barn expenses	492 29
Salary, superintendent	461 43
Sundries	441 34
Horses, wagons, harnesses, etc	272 38
Office expenses	65 72
Telephone lines	43 93
Cleaning private connections	35 91
Carpenter shop	21 36
Car fares	15 00

Ernest Street Station.

Coal and wood	$1,687 64
Engineers	920 26
Cleaning screens	696 32
Firemen	693 53
Repairs on buildings	353 43
Cleaning and repairing pumps	346 01
Care of grounds	197 60
Repairs on engines	167 17
Supplies	77 57
Repairs on boilers	33 28
Lights	19 64

Sewage Precipitation Tanks.

Chemicals	$6,569 81
Labor in sludge disposal	4,318 60
Labor on sewage precipitation	1,501 28
Electrical power	579 50
Repairs on buildings	371 14
Repairs on machinery	177 76
Miscellaneous supplies	76 99
Fuel	69 40
Repairs on tanks	63 32
Repairs on wharf	16 25
Lights	6 83
	$33,843 60

The *net* expenditure for construction of sewers to September 30, 1909, inclusive, was $8,252,859 16

The *net* expenditure for maintenance of sewers to September 30, 1909, inclusive was $1,740,539 78

Bills deposited with the city treasurer for collection from July 1 to September 30, 1909, inclusive, amounted to $438 73

As follows:

Miscellaneous work	$165 78
Cleaning private connections	46 25
Pumping out cellars	9 50
Sewer material	215 10
Testing cement	2 10
	$438 73

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of $593 74

As follows:

Miscellaneous work	$329 04
Cleaning private connections	40 00
Pumping out cellars	7 50
Sewer material	215 10
Testing cement	2 10
	$593 74

The amount of bills approved on account of sewers for the fiscal year ending September 30, 1909, inclusive, was as follows:

For construction, ... $106,509 75

Charged as follows:

Material	$22,397 15
Contract reservations	5,156 00
Additional catch-basins	1,810 83
Sundries	1,697 50
Testing cement	1,014 19
Tools	312 30
Building scow for residue disposal	12,267 99
Building wharf for residue disposal at sewage precipitation tanks	63 44
Sewer in Academy avenue, from near Chalkstone to Molloy street	974 43
Sewer in Academy avenue and Molloy street	1,429 61
Amount carried forward	$47,123 44

Amount brought forward	$47,123 44
Sewer in Academy avenue, from Smith street to Whitford avenue	1,283 99
Sewer in Baxter street and Wesleyan avenue	1,002 20
Sewer in Blackstone boulevard, west side, from Mount avenue to end of present sewer near Upton	1,013 84
Sewer in Congdon street, from a point 280 feet south of Jenckes to end of sewer north of Jenckes	4,260 70
Sewer in Cumerford street, from Wallace to Union avenue	556 64
Sewer in Curtis, Pelham and Aleppo streets	576 27
Sewer in Dewey and Harvest streets	584 12
Sewer in Fern street, from Berkley to Chalkstone avenue	396 21
Sewer in Forest street, from Ivy to Hope	97 19
Sewer in Hanover street, from near Elmwood avenue to Bucklin street	866 83
Sewer in Home avenue, from Chalkstone to Glover street	1,118 45
Sewer in Hope street, from Hart to Rochambeau avenue	5,154 58
Sewer in Hope and Savoy streets	6,143 42
Sewer in Hugo street, from the city hospital land to Douglas avenue	1,654 37
Sewer in Huron street, from near Wisdom avenue to Regent	315 83
Sewer in Larch street, from 75 feet west of Ivy to Camp, and from near Ivy street to Morris avenue	7,016 69
Sewer in Ledge and Silver Spring streets	7,640 43
Sewer in Lena and Latham streets	98 19
Sewer in Morris avenue, from Cypress street to Savoy	3,197 12
Sewer in Niagara street and in right of way	5,937 16
Sewer in Oakland avenue, from Smith street to Eaton	2,181 44
Sewer in Ohio avenue, from Virginia to Eddy street	1,111 09
Sewer in Ormsbee avenue, from angle at railroad to Lock street	1,162 91
Sewer in President avenue, from Cole to present end of sewer about 40 feet west of Wayland	9 18
Sewer in Saratoga street, from near Broad to Baxter	483 46
Sewer in Sixth and Poplar streets	4,047 58
Sewer in Sumter and Richardson streets	181 49
Sewer in Temple street, from near Potter avenue to Public street	451 48
Amount carried forward	$58,542 86

Amount brought forward	$58,542 86
Sewer in Union avenue, from a point 300 feet west of Webster avenue to Webster	631 35
Sewer in Woonasquatucket District, Section 32, Division 1	111 30
Sewer in Woonasquatucket District, Section 32, Division 2	100 80
	$106,509 75

For maintenance $129,979 65

Classified as follows:

Cleaning basins and sewers	$23,612 93
Repairing basins and sewers	13,074 08
Cleaning and repairing old drains	4,253 26
Inspection of connections	2,845 23
Sundries	2,225 69
Barn expenses	1,920 11
Horses, wagons, harnesses, etc	1,866 03
Salary, superintendent	1,772 86
Tools	1,717 56
Removing snow and ice from inlets	642 99
Use of water	300 00
Office expenses	209 47
Telephone lines	181 05
Carpenter shop	114 92
Cleaning private connections	88 03
Car fares	65 00
Repairs on gate houses	40 64
Repairs on buildings, sewer maintenance yard	1 65

ERNEST STREET STATION.

Coal and wood	$7,381 77
Engineers	3,503 11
Repairs on buildings	3,195 25
Cleaning screens	2,655 35
Firemen	2,487 33
Cleaning and repairing pumps	1,896 90
Care of grounds	754 08
Repairs on engines	329 34
Supplies	282 11
Repairs on boilers	201 36
Lights	114 43
Care of buildings	114 21

SEWAGE PRECIPITATION TANKS.

Chemicals	$21,227 04
Labor in sludge disposal	17,966 17
Amount carried forward	$117,039 95

Amount brought forward	$117,039 95
Labor on sewage precipitation	5,604 61
Miscellaneous supplies	2,832 20
Electrical power	2,236 00
Repairs on machinery	1,004 98
Repairs on buildings	681 67
Fuel	438 38
Repairs on tanks	64 97
Lights	60 64
Repairs on wharf	16 25
	$129,979 65

HIGHWAYS.

On March 31st of the current year the General Assembly passed an Act authorizing the City of Providence to charge a rental for the use of its highways for the storage and sale of merchandise, and under the provisions of such legislative authority, this department on May 28th began the issuance of licenses, for spaces on Dyer, Crawford and South Water streets, to the farmers and market gardeners who have been accustomed to occupy the aforesaid streets for the sale of their produce during the past thirty years, free of expense. Frequent conferences were held with the farmers prior to the inauguration of the new regime for the purpose of obtaining their views relative to rates and the advantages and disadvantages to accrue from the enforcement of the Act, and while a few objected to the payment of any sum whatever or to the curtailment of what they considered their rights in the premises, the consensus of opinion was that the proposed rates were reasonable and the advantage to be derived from the absolute possession of a fixed location for the conduct of their business far outweighed the pecuniary consideration. Following the successful placing of the farmers, the subject was taken up with the wholesale produce dealers and retail stores sucessively, with the result that at the present date there have been issued:

190 licenses to market gardeners at an annual rental of	$10,595 00
17 licenses to wholesalers at an annual rental of	1,851 33
114 licenses to retail stores and hucksters at an annual rental of	1,721 28

making a total revenue of $14,167.61 for 321 licenses, all of which expire March 31, 1910.

The rules and regulations established under the provisions of the Act have been very ably enforced by the police department, and it is confidently expected that this year's experience will demonstrate without question the utility of the law, aside from its pecuniary value to the city.

Three permits to open streets were issued during the quarter.

July 29th, a schedule of unpaid curbing bills amounting to $6,242.24 was certified to the assessors of taxes for collection.

September 9th, the proposal of the Narragansett Improvement Company, to lay about 7,000 square yards of Bermudez asphalt was accepted and a contract subsequently executed at the following prices, viz.:

For a layer of wearing surface 2 inches thick	$1 60	per square yard.
" 1½ inches of close binder and 1½ inches of wearing surface	1 70	" " "
" 1½ inches of solid binder.....	45	" " "

During the quarter, the following work was completed.

SIDEWALKS CURBED AND GUTTERS PAVED.

Date of order.	
March 18, 1909,	*Home avenue, from Chalkstone to Glover street.*
" " "	*Saratoga street, from Broad to Baxter.*
" " "	*Huron street, from Wisdom avenue to Regent.*
" " "	*Fern street, from Chalkstone avenue to Berkley street.*
" " "	*Temple street, from Public to Potter avenue.*

Date of order.			
May	20,	1909,	*Baxter street, from Norwich avenue to Massie.*
"	"	"	*Larch street, from Camp to Morris avenue.*
June	17,	"	*Poplar street, from Hope to Morris avenue.*

The following work was in progress September 30, 1909.

SIDEWALKS CURBED AND GUTTERS PAVED.

Date of order.			
March	18,	1909,	*Oakland avenue, from Eaton street to Smith.*
Sept.	16,	"	*Jillson street, from Broad to Eddy.*

The following work, ordered by the board of aldermen and city council, had not commenced September 30, 1909, namely:

SIDEWALKS CURBED AND GUTTERS PAVED.

Date of order.			
May	20,	1909,	*Ledge street, from Charles to Silver Spring.*
June	17,	"	*Harvest street, from River avenue to Robin street.*
"	"	"	*Sixth street, from Summit avenue to Hope street.*
September	16,	"	*Sumter street, from Emerson to Hamilton.*
"	"	"	*Cumerford street, from Wallace to Union avenue.*
"	"	"	*Dewey street, from Laban to Eastwood avenue.*

REBUILD.

Date of order.

June 8, 1909, *Easterly portion of Exchange place, between Exchange street and the bridge over the river.*

Bills approved on account of highways from July 1 to September 30, 1909, inclusive, amounted to:

Regular appropriation, ... $102,928 23

Classified as follows:

Cleaning streets	$28,199 35	
Repairs on unpaved streets	25,684 63	
Crushed stone — material and labor	10,878 39	
Repairs on paved streets	6,708 77	
Barn expenses	2,849 14	
Blacksmith and wheelwright shop	2,557 89	
Watering streets	2,180 75	
Stone — paving and crosswalk	1,683 90	
Tools, implements, etc	1,169 70	
Labor on material	844 80	
Fencing streets — material and labor	827 65	
Repairs on stone crushers	461 50	
Superintendent's salary	461 43	
Steam rollers — repairs and supplies	352 77	
Horses, wagons, harnesses, etc	256 49	
Building driveways, etc	241 76	
Watchman at city yard	192 00	
Sundries	149 96	
Removing stone crusher to Northup avenue	84 13	
Car fares	35 00	
Office expenses, city yard	26 84	
Repairs on buildings, highway yard	15 48	
Telephone lines	5 60	
		$85,867 93

NEW WORK — BUILDING AND REBUILDING STREETS, ETC.

SIDEWALKS CURBED AND GUTTERS PAVED.

Baxter street, from Norwich avenue to Massie	$970 52	
Fern street, from Chalkstone avenue to Berkley street	889 82	
Home avenue, from Chalkstone to Glover street	2,679 97	
Amounts carried forward	$4,540 31	$85,867 93

Amounts brought forward	$4,540 31	$85,867 93
Huron street, from Wisdom avenue to Regent	746 65	
Jillson street, from Broad to Eddy	305 29	
Larch street, from Camp to Morris avenue	3,689 31	
Oakland avenue, from Eaton street to Smith	2,360 71	
Poplar street, from Hope to Morris avenue	1,811 93	
Saratoga street, from Broad to Baxter	1,763 49	
Sixth street, from Summit avenue to Hope street	118 35	
Temple street, from Public to Potter avenue	1,724 23	
		17,060 30
		$102,928 23

Bills deposited with the city treasurer for collection from July 1 to September 30, 1909, inclusive, amounted to - . . $13,265 75

As follows:

Labor and material	$11,035 63
Rentals for use of public highways	1,576 77
Boarding horses for other departments	200 40
Building driveways, etc	192 56
Street sweepings	147 52
Manure from barn	76 00
Blacksmith and harness work for other departments	29 27
Empty oil barrels	7 60
	$13,265 75

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of $17,594 30

As follows:

Labor and material	$13,335 52
Rentals for use of public highways	2,607 11
Blacksmith and harness work for other departments	711 13
One horse sold the treasury department	325 00
Boarding horses for other departments	200 40
Building driveways, etc	183 02
Street sweepings	148 52
Manure from barn	76 00
Empty oil barrels	7 60
	$17,594 30

Bills approved on account of highways for the fiscal year ending September 30, 1909, inclusive, amounted to:

Regular appropriation		$325,232 00

Classified as follows:

Cleaning streets	$80,424 73	
Repairs on unpaved streets	64,736 78	
Crushed stone — material and labor	47,302 41	
Repairs on paved streets	32,383 70	
Barn expenses	11,369 69	
Blacksmith and wheelwright shop	10,613 20	
Screening gravel	8,449 07	
Stone — paving and crosswalk	5,826 42	
Removing stone crusher to Northup avenue	5,006 16	
Watering streets	4,161 18	
Tools, implements, etc	4,011 74	
Removing snow and ice	3,992 12	
Steam rollers — repairs and supplies	3,405 08	
Labor on material	3,301 96	
Repairs on stone crushers	2,982 72	
Horses, wagons, harnesses, etc	2,412 75	
Superintendent's salary	1,768 00	
Fencing streets — material and labor	1,070 95	
Watchman at city yard	730 00	
Building driveways, etc	526 43	
Sundries	489 96	
Office expenses, city yard	262 11	
Car fares	135 00	
Repairs on buildings, highway yard	40 11	
Telephone lines	22 40	
		$295,424 67

New Work — Building and Rebuilding Streets, Etc.

Sidewalks Curbed and Gutters Paved.

Alton street, from Regent avenue to Wisdom	$30 08	
Baxter street, from Norwich avenue to Massie	970 52	
Boylston avenue, from Montague street to Olney	1,007 78	
Fern street, from Chalkstone avenue to Berkley street	889 82	
Hammond street, east side, from Cranston to Durfee	86 70	
Hanover street, from Elmwood avenue to Dexter street	2,242 68	
Amounts carried forward	$5,227 58	$295,424 67

Amounts brought forward	$5,227 58	$295,424 67
Home avenue, from Chalkstone to Glover street	2,679 97	
Huron street, from Wisdom avenue to Regent	746 65	
Jillson street, from Broad to Eddy	305 29	
Larch street, from Camp to Morris avenue	6,617 00	
Lenox avenue, from Hamilton street to Emerson	2,124 49	
Molloy street, from Rowan to Academy avenue	1,972 60	
Oakland avenue, from Eaton street to Smith	2,360 71	
Poplar street, from Hope to Morris avenue	1,811 96	
President avenue, from Wayland to Cole	2,355 01	
Saratoga street, from Broad to Baxter	1,763 49	
Sixth street, from Summit avenue to Hope street	118 35	
Temple street, from Public to Potter avenue	1,724 23	
		29,807 33
		$325,232 00

SIDEWALKS AND CURBING.

Bills approved on account of sidewalks and curbing from July 1 to September 30, 1909, inclusive, amounted to . . . $9,336 25

Charged as follows:

Granite curbing	$5,963 40
Repairing sidewalks and gutters	2,255 93
Concreting sidewalks	1,116 92
	$9,336 25

Bills deposited with the city treasurer for collection (for granite curbing), from July 1 to September 30, 1909, inclusive, amounted to $150 90

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of $396 51

As follows:

Curbing bills	$201 78
Granite curbing	194 73
	$396 51

Bills approved on account of sidewalks and curbing for the fiscal year ending September 30, 1909, inclusive, amounted to . $20,032 75

Charged as follows :

Granite curbing	$9,218 86
Concreting sidewalks	5,440 70
Repairing sidewalks and gutters	5,373 19
	$20,032 75

CITY ENGINEER.

Bills approved on account of the city engineer's department from July 1 to September 30, 1909, inclusive, amounted to . $11,017 26

Charged as follows :

Salary, city engineer	$1,125 00
Salaries of assistants	8,073 30
Salaries of clerks	933 71
Supplies, drawing material, etc	429 72
Car fares	402 75
Telephone lines	35 68
Meteorological instruments and repairs	12 85
Sundries	8 70
Instruments and repairs	55
	$11,017 26

Bills deposited with the city treasurer for collection (for one map of high pressure water service), from July 1 to September 30, 1909, inclusive, amounted to $1 00

During the quarter, coupons from bills collected (for one map of high pressure water service), have been returned and receipted for to the amount of $1 00

Bills approved on account of the city engineer's department for the fiscal year ending September 30, 1909, inclusive, amounted to $42,850 55

Charged as follows:

Salary, city engineer	$4,500 00
Salaries of assistants	31,731 55
Salaries of clerks	3,587 42
Supplies, drawing material, etc	1,171 44
Car fares	1,011 70
Installation of card index	602 77
Telephone lines	144 22
Instruments and repairs	45 59
Meteorological instruments and repairs	42 75
Sundries	8 91
Carriage hire	4 20
	$42,850 55

BRIDGES.

September 21st, the proposal of the Narragansett Improvement Company, to furnish and lay Burmudez asphalt on either Branch avenue or Mill street bridges, was accepted at the following prices, viz.:

For 2-inch wearing coat	$1 60	per square yard.
" 1½-inch wearing coat and 1½-inch binder	1 70	" " "
" 6-inch Portland cement concrete base	1 00	" " "

Bills approved on account of bridges from July 1 to September 30, 1909, inclusive, amounted to $10,782 79

Charged as follows:

Acorn street bridge	$2 71
Atwell avenue bridge	3 14
Barn expenses	108 73
Branch avenue bridge, to rebuild	81 10
Charles street railroad bridge	48 97
Crawford street bridge	124 92
Eagle street bridge	17 27
Exchange bridge	485 76
Horses, wagons, harnesses, etc	5 70
Lumber, hardware, etc	138 25
Merino bridge	21 73
Point street bridge	211 07
Amount carried forward	$1,249 35

Amount brought forward	$1,249 35
Post office bridge	3 59
Red bridge	478 71
Rent of keeper's house—Washington bridge	36 00
Salaries—Point street bridge	1,181 65
Salaries—Red bridge	611 89
Salaries—Washington bridge	619 54
Sundries	166 03
Telephone lines	2 68
Tools	93 50
Valley street bridge—north span	37 94
Valley street bridge—south span	112 49
Veazie street bridge	1 79
Wanskuck bridge—to rebuild	3,884 75
Washington bridge	232 51
Washington row bridge	486 60
West river street bridge	17 75
Weybosset bridge	1,566 02
	$10,782 79

Bills approved on account of bridges for the fiscal year ending September 30, 1909, inclusive, amounted to $30,979 04

Charged as follows:

Acorn street bridge	$2 71
Atwells avenue bridge	19 48
Barn expenses	453 03
Branch avenue bridge—to rebuild	549 20
Branch avenue culvert	2 91
Building at city yard	19 17
Car fares	50 00
Cemetery street bridge	7 56
Charles street railroad bridge	53 02
Crawford street bridge	289 71
Eagle street bridge	35 91
Exchange bridge	485 76
Foot bridge over Woonasquatucket river	448 88
Gaspee street bridge	140 99
Hawkins street bridge	13 08
Horses, wagons, harnesses, etc	81 64
Lumber, hardware, etc	823 58
Manton avenue bridge	510 58
Merino bridge	33 74
Mill street bridge	51 35
Nash lane bridge	70 61
Amount carried forward	$4,142 91

Amount brought forward	$4,142 91
Park street bridge	53 84
Point street bridge	1,716 76
Post office bridge	157 80
Promenade street bridge	677 28
Randall street bridge	13 95
Red bridge	1,518 05
Rent of keeper's house—Washington bridge	144 00
Salaries—Point street bridge	4,358 40
Salaries—Red bridge	2,306 81
Salaries—Washington bridge	2,352 06
Smith street bridge	5 11
Sundries	1,050 43
Telephone lines	10 72
Tools	670 06
Valley street bridge—north span	41 86
Valley street bridge—south span	112 49
Veazie street bridge	112 56
Wanskuck bridge	18 82
Wanskuck bridge—to rebuild	5,377 70
Washington bridge	3,764 47
Washington row bridge	579 25
West river street bridge	20 88
Weybosset bridge	1,765 83
	$30,979 04

Bills approved for account of building the river walls between the Burnside and Exchange bridges for the fiscal year ending September 30, 1909, inclusive, amounted to. $4,136 10

PUBLIC LIGHTS.

Bills approved on account of the public lights from July 1 to September 30, 1909, inclusive, amounted to $68,494 5-

Charged as follows:

Arc lights	$48,003 52
Incandescent lights	14,159 67
Welsbach lights	6,289 30
Salaries	21 00
Sundries	14 85
Setting and removing gas posts	6 20
	$68,494 54

Bills deposited with the city treasurer for collection from July 1 to September 30, 1909, inclusive, amounted to . . . $10 00

As follows:

Removing gas posts	$6 00
Common lanterns	4 00
	$10 00

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of $10 00

As follows:

Removing gas posts	$6 00
Common lanterns	4 00
	$10 00

Bills approved on account of the public lights for the fiscal year ending September 30, 1909, inclusive, amounted to . . $277,989 48

Charged as follows:

Arc lights	$196,706 37
Incandescent lights	55,956 88
Welsbach lights	25,050 94
Salaries	231 00
Setting and removing gas posts	29 44
Sundries	14 85
	$277,989 48

PUBLIC WORKS OFFICE.

Bills approved on account of the public works office from July 1 to September 30, 1909, inclusive, amounted to . . . $5,637 76

Charged as follows:

Salaries of commissioner and secretary	$1,925 00
Salaries of office assistants	3,359 95
Office supplies	322 63
Telephone lines	30 18
	$5,637 76

Bills approved on account of the public works office for the fiscal year ending September 30, 1909, inclusive, amounted to . $22,582 86

Charged as follows:

Salaries of commissioner and secretary	$7,775 00
Salaries of office assistants	13,627 83
Office supplies	1,076 99
Telephone lines	103 04
	$22,582 86

FORESTRY.

Bills approved on account of the forestry department from July 1 to September 30, 1909, inclusive, amounted to . . . $2,071 15

Charged as follows:

Salary, city forester	$380 00
Trimming, repairing and removing trees and shrubs	886 18
Spraying trees and shrubs	614 84
Tools and supplies	186 64
Nursery at Roger Williams park — labor and supplies	3 49
	$2,071 15

Bills deposited with the city treasurer for collection from July 1 to September 30, 1909, inclusive, amounted to . . . $5 50

As follows:

Supervising trimming trees	$4 50
Spraying tree	1 00
	$5 50

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of $5 50

As follows:

Supervising trimming trees	$4 50
Spraying tree	1 00
	$5 50

Bills approved on account of the forestry department for the fiscal year ending September 30, 1909, inclusive, amounted to . $5,969 59

Charged as follows:

Salary—city forester	$1,460 00	
Trimming, repairing and removing trees and shrubs	3,232 02	
Spraying trees and shrubs	686 12	
Tools and supplies	386 63	
Barn expenses	169 11	
Horses, wagons, harnesses, etc	32 22	
Nursery at Roger Williams park—labor and supplies	3 49	
	$5,969 59	

CONTINGENCIES.

July 9th, the proposal of the Providence Ice Company to furnish the ice required for the public drinking fountains during the season of 1909, at $5.00 per ton, was accepted and a contract subsequently executed.

WALTER F. SLADE,

Commissioner.

1910.] CITY DOCUMENT. [No. 4.

ONE HUNDRED AND EIGHTH QUARTERLY REPORT

OF THE

Department of Public Works

OF THE

CITY OF PROVIDENCE, R. I.

QUARTER ENDING DECEMBER 31, 1909.

The Providence Press:
Snow & Farnham Co., City Printers,
63 Washington Street,
1910.

REPORT.

OFFICE OF THE DEPARTMENT OF PUBLIC WORKS,
CITY HALL, PROVIDENCE, R. I., January 2, 1910.

TO THE HONORABLE THE CITY COUNCIL:

In compliance with the requirements of Chapter 41 of the ordinances, the Commissioner of Public Works respectfully presents the one hundred and eighth quarterly report of the expenditures by the several departments under his direction and control, with statements of work ordered and the condition and cost of same, for the quarter ending December 31, 1909.

WATER WORKS.

November 30th, the proposal of the Standard Cast Iron Pipe and Foundry Company to furnish and deliver in the city yard 756 tons of water pipe, of various sizes, was accepted and a contract subsequently executed at the following prices, viz.:

16-inch pipe, $24.85; 8-inch pipe, $25.10; 6-inch pipe, $25.60; 4-inch pipe, $26.60 per net ton.

December 1st, the proposal of W. R. Conard, of Burlington, N. J., to inspect 756 tons of water pipe at the foundry of the Standard Cast Iron Pipe and Foundry Company for the sum of 20 cents per ton, was accepted.

Contracts were also awarded as follows:

To Nassau Smelting and Refining Works, of New York, 40,000 pounds of pig lead at $4.47½ per cwt.

To Allen and Reed, Inc., for 53,000 pounds of lead pipe of various sizes at $5.26½ per cwt.

To Allen Fire Department Supply Company, for taps, stops and plugs of various sizes, the sum of $1,297.50.

To Fuller Iron Works, for the special castings for the water department required during the year 1910, an estimated sum of $2,733.17.

All of which materials are to be delivered in the city yard.

December 6th, a contract was awarded to the Coffin Valve Company, of Boston, for furnishing and delivering in the city yard fire hydrants and water gates as follows: 4 special hydrants for high service for $540.00; 10 6-inch post hydrants with double disc gates, for $700.00; 3 16-inch, 10 8-inch, 75 6-inch, 10 4-inch, 12 3-inch, 6 2½-inch, 6 2½-inch special, 4 16-inch special, and 4 8-inch special water gates, for the sum of $2,378.00.

December 14th, the proposal of the Coffin Valve Company to furnish and deliver in the city yard one 30-inch bronze mounted gate of the Coffin pattern for the sum of $270.00, and one 24-inch gate of the same description, for the sum of $225.00, was accepted.

December 21st, the proposal of the Coffin Valve Company to furnish and deliver in the city yard, five 24-inch gate valves for the sum of $217.00 each, was accepted.

The average daily consumption of water during the quarter ending December 31, 1909, was 14,902,090 gallons, and the average daily consumption for the year was 15,156,487 gallons.

Water pipes were laid during the quarter as follows:

8-INCH.	
In Admiral, Hillwood and Niagara streets; in Narragansett boulevard and Oxford street; Laurel Hill, Pawtuxet and Pontiac avenues in the town of Cranston....	1,797.58 feet.
6-INCH.	
In Barnaby, Baxter, Como, Crandall, Durham, Gay, Gilman, Gloucester, Hamilton, Hillwood, Ivy, Jillson, Larch, Plymouth, Sumter, Seamans, and Whitehall streets; Bartlett and Morris avenues; and in Argyle, Auburn, Bailey, Grace, Hillwood, Mill, Midler, Norfolk and Ruxton streets; Bartlett, Bayview, Chestnut Hill, Edgewood, Oak, Pontiac, Terrace, Victoria and Wentworth avenues in the town of Cranston.....	9,204.26 feet.
Total.....	11,001.84 feet.

or 2.083 + miles.

Statement of sizes and lengths of pipe laid since the commencement of the work:

42-inch	25,630.70 feet.
36-inch	10,208.82 feet.
30-inch	61,410.07 feet.
24-inch	46,228.46 feet.
20-inch	9,626.59 feet.
16-inch	48,779.97 feet.
12-inch	128,276.25 feet.
10-inch	15,054.99 feet.
8-inch	319,288.54 feet.
6-inch	1,326,578.13 feet.
Total	1,991,082.52 feet.

or 377.098 + miles.

Statement of sizes and lengths of pipe laid for the special water service for fire protection since the commencement of the work:

24-inch	4,299.44 feet.
16-inch	40,498.58 feet.
12-inch	6,114.68 feet.
8-inch	625.18 feet.
6-inch	1.02 feet.
Total	51,538.90 feet.

or 9.761 + miles.

Nine fire hydrants were set during the quarter, one in each of the following locations:

Chestnut Hill avenue, Cranston, north side 5 feet east of Princess.
Eddy street, east side, on range of north building line of Jillson.
Laurel Hill avenue, Cranston, west side, 25 feet north of Chestnut Hill.
Midler street, Cranston, east side, 12 feet south of Ruxton.
North Main street, east side, 9 feet north of Rochambeau avenue.
North Main street, east side, on north line of Third.
North Main street, east side, 13 feet north of Seventh.
Pawtuxet avenue, Cranston, east side, 60 feet north of Wentworth.
Pontiac avenue, Cranston, east side, 3 feet south of Eldridge.

The total number of fire hydrants, exclusive of those for special service for fire protection, is now two thousand one hundred and ninety-eight — two thousand and forty-eight flush and one hundred and fifty post.

The following table shows the lengths, sizes, etc., of services laid during the year ending December 31, 1909:

Months.	Length of Services in Feet.							Number and Size of Taps Used.					Number and Size of Stops Used.					Service Boxes Used.
	Size of Pipe.				Totals.	Total Length of Trenching.	Total Length of Paving.											
	⅝ inch.	¾ inch.	1 inch.	1¼ inch.				½ in.	⅝ in.	¾ in.	1 in.	Total.	½ in.	⅝ in.	¾ in.	1 in.	Total.	
January	127.2	.....	.....	13.2	140.4	150.0	31.0	10	....	....	1	11	11	....	....	1	12	12
February	119.4	.....	.....	.....	119.4	126.0	24.0	8	....	....	....	8	8	....	....	....	8	8
March	789.0	87.8	8.2	.....	885.0	930.0	115.0	50	4	1	1	56	51	4	1	....	56	57
April	1,117.0	87.4	....	.....	1,204.5	1,269.5	147.0	69	8	....	....	77	72	8	....	....	80	80
May	935.1	93.4	28.0	7.0	1,063.5	1,119.5	163.0	45	9	2	2	58	54	8	1	1	64	67
June	951.3	42.6	30.2	28.2	1,052.3	1,103.5	131.0	55	3	2	2	62	58	3	1	1	63	65
July	1,077.7	14.7	30.2	.....	1,122.6	1,176.0	99.0	56	2	1	2	61	62	2	1	....	65	67
August	1,217.8	100.4	8.2	67.6	1,394.0	1,466.0	178.0	60	9	2	5	76	77	8	1	3	89	94
September	799.1	84.6	24.4	7.0	915.1	954.5	91.0	51	8	2	1	62	53	8	2	1	64	65
October	1,178.8	51.8	.....	65.7	1,296.3	1,362.0	84.0	66	5	2	2	75	76	5	....	1	82	85
November	1,084.9	33.9	8.2	.....	1,127.0	1,185.0	94.0	56	5	3	1	65	67	3	1	....	71	76
December	821.9	8.2	8.2	8.2	846.5	887.5	119.0	47	1	1	2	51	48	1	1	1	51	52
Totals	10,219.3	604.8	145.6	196.9	11,166.6	11,729.5	1,276.0	573	54	16	19	662	637	50	9	9	705	728

The following table shows the lengths, sizes, etc., of services laid during the thirty-three years ending December 31, 1909:

YEAR.	Length of Services in Feet.									Taps Used.						Stops Used.						Service boxes used.
	Sizes of Pipes.						Totals.	Trenching.	Paving.													
	½ inch.	⅝ inch.	¾ inch.	1 inch.	1¼ inch.	1½ inch.				⅜ in.	½ in.	⅝ in.	¾ in.	1 in.	To-tals.	⅜ in.	½ in.	⅝ in.	¾ in.	1 in.	To-tals.	
To Dec. 31, 1908.....	9,919.9	283,445.78	25,690.19	5,606.6	4,275.0	457.7	329,395.17	346,439.29	41,838.28	612	17,002	1,949	504	398	20,465	645	18,123	1,619	349	327	21,063	21,670
1909.....	... .	10,219.30	604.80	145.6	196.9	.....	11,166.60	11,729.50	1,276.00	....	573	54	16	19	662	....	637	50	9	9	705	728
Totals...	9,919.9	293,665.08	26,294.99	5,752.2	4,471.9	457.7	340,561.77	358,168.79	43,114.28	612	17,575	2,003	520	417	21,127	645	18,760	1,669	358	336	21,768	22,398

The following table shows the lengths, sizes, etc., of services laid during the year ending December 31, 1909:

Months.	Length of Services in Feet. Size of Pipe. ¾ inch.	¾ inch	1 inch.	1¼ inch	Totals.	Total Length of Trenching.	Total Length of Paving.	Number and Size of Taps Used. ½ in.	¾ in.	1 in.	1 in.	Total.	Number and Size of Stops Used. ½ in.	¾ in.	1 in.	1 in.	Total.	Service Boxes Used.
January	127.2	.....	.....	13.2	140.4	150.0	31.0	10	....	....	1	11	11	....	....	1	12	12
February	119.4	.....	.....	.....	119.4	126.0	24.0	8	....	....	....	8	8	....	....	....	8	8
March	789.0	87.8	8.2	.....	885.0	930.0	115.0	50	4	1	1	56	51	4	1	....	56	57
April	1,117.0	87.4	..	.....	1,204.5	1,260.5	117.0	69	8	....	....	77	72	8	....	....	80	80
May	935.1	93.4	28.0	7.0	1,063.5	1,119.5	163.0	45	9	2	2	58	54	8	1	1	64	67
June	951.3	42.6	30.2	28.2	1,052.3	1,103.5	131.0	55	3	2	2	62	58	3	1	1	63	65
July	1,077.7	14.7	30.2	.....	1,122.6	1,176.0	90.0	56	2	1	2	61	62	2	1	....	65	67
August	1,217.8	100.4	8.2	67.6	1,394.0	1,466.0	178.0	60	9	2	5	76	77	8	1	3	89	94
September	799.1	84.6	24.4	7.0	915.1	954.5	91.0	51	8	2	1	62	53	8	2	1	64	65
October	1,178.8	51.8	.....	65.7	1,296.3	1,362.0	84.0	66	5	2	2	75	76	5	....	1	82	85
November	1,084.9	33.9	8.2	.....	1,127.0	1,185.0	94.0	56	5	3	1	65	67	3	1	....	71	76
December	821.9	8.2	8.2	8.2	846.5	887.5	119.0	47	1	1	2	51	48	1	1	1	51	52
Totals	10,219.3	604.8	145.6	196.9	11,166.6	11,729.5	1,276.0	573	54	16	19	662	637	50	9	9	705	728

The following table shows the lengths, sizes, etc., of services laid during the thirty-three years ending December 31, 1909:

YEAR.	Length of Services in Feet.									Taps Used.						Stops Used.						Service boxes used.
	Sizes of Pipes.						Totals.	Trenching.	Paving.													
	½ inch.	⅝ inch.	¾ inch.	1 inch.	1¼ inch.	1½ inch.				⅜ in.	½ in.	⅝ in.	¾ in.	1 in.	To-tals.	⅜ in.	½ in.	⅝ in.	¾ in.	1 in.	To-tals.	
To Dec. 31, 1908.....	9,919.9	283,445.78	25,690.19	5,606.6	4,275.0	457.7	329,395.17	346,439.29	41,838.28	612	17,002	1,949	504	398	20,465	645	18,123	1,619	349	327	21,063	21,670
1909.....	... .	10,219.30	604.80	145.6	196.9	.....	11,166.60	11,729.50	1,276.00	....	573	54	16	19	662	....	637	50	9	9	705	728
Totals...	9,919.9	293,665.08	26,294.99	5,752.2	4,471.9	457.7	340,561.77	358,168.79	43,114.28	612	17,575	2,003	520	417	21,127	645	18,760	1,669	358	336	21,768	22,398

Changes in Size and Location of Services in 1909.

Taps and Stops.											Sizes and Lengths of Lead Pipe.													
Taken Out.						Inserted.					Taken Out.					Inserted.								
⅜ inch.	½ inch.	¾ inch.	¾ inch.	1 inch.	¾ inch.	½ inch.	¾ inch.	¾ inch.	1 inch.	½ inch.	⅜ inch.	¾ inch.	1 inch.	1¼ inch.	1½ inch.	⅜ inch.	¾ inch.	1 inch.	1¼ inch.	1½ inch.	Trenching.	Paving.	Change in size only.	Change in location only.	Change in both size and location.	Relaid.
41	35	9	14	5	.....	37	14	8	4	580.8	530.6	95.6	184.8	43.6	8.2	203.6	175.8	59.1	41.6	.....	1692.0	498.5	50	3	5	5

46 Services have been removed.
During the year 114 taps were dug up and examined.
111 were cleaned and 3 were found unobstructed.
22 private taps were inserted.

the commencement to December 31, 1909:

Months.	1871.	1872.	1873.	1874.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1889.	1890.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.
January...	..	54	33	21	34	55	15	49	9	20	7	17	15	21	17	18	26	7	39	36	39	56	40	29	30	27	30	40	18	24	18	27	26	19	24	26	28	21	28
February..	..	47	18	18	7	25	23	18	9	19	3	11	9	10	7	15	7	10	21	25	26	23	24	28	8	28	24	21	7	15	10	18	26	12	11	26	16	12	25
March.....	..	38	34	63	7	45	32	60	19	46	23	39	11	28	9	24	16	14	19	28	24	28	36	40	27	20	42	46	28	30	24	39	35	12	20	40	22	31	45
April.....	..	109	109	108	32	108	82	78	52	58	55	49	55	62	48	68	60	38	61	53	73	76	71	76	67	100	70	53	69	47	73	73	60	58	60	57	50	47	59
May.....	..	224	206	147	162	168	136	95	80	84	66	72	78	62	62	61	70	52	74	66	114	83	91	81	79	98	82	51	73	60	67	52	70	76	80	71	78	62	69
June... ...	..	329	295	151	172	148	114	103	71	109	82	48	64	81	81	59	50	86	59	80	83	103	106	105	100	76	86	61	73	60	96	71	58	67	75	68	72	96	80
July.....	..	333	261	127	141	158	83	80	49	75	56	77	66	76	77	83	62	89	74	67	85	105	93	80	89	83	59	51	66	44	81	74	59	80	73	45	73	51	74
August....	..	224	209	123	83	94	91	51	51	39	58	87	69	61	57	71	49	52	56	76	95	104	115	116	83	64	69	54	80	66	78	62	57	52	75	65	83	56	84
September	..	184	147	139	101	94	80	63	44	37	60	67	93	50	70	59	74	63	64	77	93	114	88	112	70	71	67	53	53	76	72	56	72	61	56	71	51	82	79
October....	..	138	135	160	92	84	81	78	79	48	61	56	47	65	62	52	80	70	64	54	104	102	96	85	90	70	62	47	54	65	66	43	58	66	64	77	74	64	71
November.	..	100	104	185	86	54	73	57	63	54	37	64	49	51	39	57	69	47	58	72	81	118	80	70	68	52	54	42	45	54	63	55	48	58	60	66	70	73	82
December.	56	83	45	122	60	35	55	45	47	29	40	27	56	44	46	28	49	42	53	50	83	102	62	62	57	58	53	47	40	56	44	46	43	51	48	40	41	63	66
Totals...	56	1863	1596	1364	977	1068	865	777	573	618	548	614	612	611	575	595	612	570	642	684	900	1014	902	884	768	747	698	566	606	597	692	616	612	612	646	652	658	658	766

The receipts for water each year since the commencement have been as follows:

Year.	Amount.	Year.	Amount.
1872	$41,003 51	1891	$404,553 84
1873	97,386 09	1892	409,421 21
1874	132,052 39	1893	427,546 51
1875	165,144 71	1894	432,383 97
1876	183,868 73	1895	471,069 97
1877	200,039 39	1896	485,187 33
1878	218,883 33	1897	490,652 47
1879	229,551 78	1898	502,603 10
1880	247,705 06	1899	522,124 46
1881	260,530 87	1900	554,949 62
1882	269,318 77	1901	578,869 07
1883	283,632 89	1902	605,307 35
1884	302,368 36	1903	621,016 74
1885	313,561 21	1904	670,700 90
1886	323,084 67	1905	673,252 97
1887	339,513 60	1906	691,459 12
1888	346,731 58	1907	741,437 03
1889	377,497 97	1908	717,752 39
1890	401,140 86	1909	710,272 98

The amount of bills approved on account of water works from October 1 to December 31, 1909, inclusive, was:

For maintenance, ... $66,120 19

Classified as follows:

PETTACONSET PUMPING STATION.

Coal and wood	$4,483 47
Sundries	979 70
Firemen	929 88
Engineers	616 08
Amount carried forward	$7,009 13

Amount brought forward	$7,009 13	
Repairs on boilers	508 71	
Superintendence	456 57	
Oil, waste and packing	208 71	
Care of grounds	176 82	
Barn expenses	68 14	
Labor on fuel	68 04	
Real estate	39 90	
Lights	21 89	
Allis-Chalmers high-duty engine	20 16	
Horses, wagons, harnesses, etc.	1 86	
Corliss pumping engine and house	50	
		$8,580 43

SAND FILTRATION PLANT.

Cleaning beds	$2,091 72	
Labor and supplies, pumping	1,908 59	
Laboratory — labor and supplies	742 27	
Installation	728 32	
Miscellaneous supplies	151 90	
Repairs on buildings	25 75	
		5,648 55

SOCKANOSSET RESERVOIR.

Sundries	$537 82	
Watchman	172 00	
		709 82

HOPE PUMPING STATION.

Engineers	$663 07	
New engine and boiler, to furnish and erect	635 97	
Coal and wood	445 89	
Firemen	387 00	
Sundries	287 88	
Lights	49 40	
Holly pumping engine	26 00	
Oil, waste and packing	15 78	
Repairs on boilers	5 54	
		2,516 53

HOPE RESERVOIR.

Watchman	$211 50	
Sundries	205 34	
		416 84

FRUIT HILL RESERVOIR.

Sundries	$516 57	
Watchman	186 00	
		702 57
Amount carried forward		$18,574 74

Amount brought forward		$13,574 74
Meter Department.		
Water meters	$6,726 38	
Setting and repairing meters	1,645 66	
		8,372 04
Pipe Line and Service Stops.		
Repairs	$3,779 39	
Salaries of assistant engineers	1,892 43	
Inspection of pipe line and services	1,675 34	
Superintendence—salaries	942 82	
		8,289 98
Pipe Yard.		
Laying water pipe	$6,484 74	
Leading main from Sockanosset to city—to lay	3,350 00	
Service pipe	2,735 44	
Laying service pipe	1,750 49	
Special water service for fire protection	911 25	
Special castings	763 47	
Pig lead and tin	679 27	
Labor on and carting pipe	195 84	
Tools	175 42	
Pipe yard, office expenses	60 96	
Cast iron water pipe	27 94	
Fire hydrants, boxes and covers	13 97	
Stop valves	13 97	
Taps and stops	13 97	
		17,176 73
Miscellaneous.		
Town of Cranston tax	$9,616 62	
Clerks' and inspectors' salaries	1,920 58	
Barn expenses	929 57	
Town of North Providence tax	400 00	
Prevention of defilement of the Pawtuxet	300 00	
Horses, wagons, harnesses, etc	207 59	
Car fares	200 00	
Telephone lines	122 68	
Public drinking fountains and troughs	8 41	
Inspection of water pipe with reference to electrolysis	1 25	
		13,706 70
		$66,120 19

The total expenditures to December 31, 1909, inclusive, was $12,086,781 51

The *net* expenditure for maintenance from October 1, to December 31, 1909, inclusive, was $55,341 10

The *net* expenditure for maintenance to December 31, 1909, inclusive, was $4,221,252 30

The value of the water works system January 1, 1909, as estimated by the city engineer, was as follows:

Pettaconset pumping station	$340,694 00	
Hope pumping station	112,151 77	
Sockanosset, Hope and Fruit Hill Reservoirs	668,949 81	
Main lines and distribution pipes	2,855,152 25	
Real estate in Pawtuxet and Lincoln	15,975 00	
Tools and supplies	39,942 62	
		$4,032,865 45

Bills deposited with the city treasurer for collection from October 1 to December 31, 1909, inclusive, amounted to . . . $91,766 26

As follows:

Water	$81,178 71	
Water meters	6,377 50	
Setting and repairing meters	2,247 00	
Labor and material, laying services, etc.	1,736 32	
Rent of real estate	110 90	
Penalties	56 00	
Permanently closing service stops	30 00	
Repairs on pipe lines	26 33	
Empty oil barrels	3 50	
		$91,766 26

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of . $99,141 58

As follows:

Water	$88,306 49	
Water meters	6,329 25	
Setting and repairing meters	2,244 27	
Labor and material, laying services, etc.	2,066 99	
Rent of real estate	78 75	
Penalties	56 00	
Permanently closing service stops	30 00	
Repairs on pipe line	26 33	
Empty oil barrels	3 50	
		$99,141 58

SEWERS.

During the quarter ending December 31, 1909, three hundred and one permits were issued to drain layers — one hundred and sixty-nine for new work and one hundred and thirty-two for extensions and repairs of drains.

November 10th, the proposal of the Providence Dry Dock and Marine Railway Company to make the necessary repairs to the scow "Pomegansett" was accepted as follows:

Hard pine lumber $35.00 to $40.00 per M. according to size, plus commission of 10 per cent.

Carpenters and calkers,	$3 50	per day
Foreman,	4 00	" "
Laborers,	2 50	" "
Use of dry dock, sum of	$200 00	

November 19th, the proposal of the Providence Engineering Works to furnish and install the centrifugal pumps at the Ernest street station for the sum of $26,500.00 was accepted and a contract subsequently executed.

December 1st, a contract was awarded to Fuller Iron Works for furnishing and delivering in the city yard the sewer castings required during the year 1910; the estimated amount of said contract is $1,135.60.

December 30th, contracts were awarded for material required during the year 1910 as follows:

To William M. Harris, Jr., for not exceeding 20,000 barrels of "Nazareth" Portland cement at $1.56 per barrel, delivered on the work in bags.

To Charles M. Kelley, for not exceeding 1,500 barrels of "Brooklyn Bridge" Rosendale cement at $1.00 per barrel, delivered on the work in barrels.

To William M. Harris, Jr., for one-half the quantity of sewer pipe required during the year 1910, at a discount of 72½ per cent. from list prices on all 3-foot lengths, and 74½ per cent. on 2-foot lengths.

To Charles M. Kelley, for one-half the quantity of sewer pipe required during the year 1910, at a discount of 72½ per cent. from list prices on all 3-foot lengths, and 74½ per cent. on 2-foot lengths.

The following proposals were also received and accepted viz.:

From Edwin D. Allen, for 35 flagstones, 5 feet by 5 feet by 4 inches, at $5.30 each, delivered.

From Walter H. Thurber & Company, for 50 catch-basin inlet-stones at $4.70 each, delivered.

SEWERS CONSTRUCTED TO DECEMBER 31, 1909, IN MILES.

ITEMS.	KIND.	Built previous to 1909.	Built during 1909.	Total to Dec. 31, 1909.
Under regular appropriation.....	Brick.	42.945	897	43.842
Under regular appropriation..... ...	Pipe.	142.302	3.277	145.579
Under improved sewerage appropriation.....	Brick and Pipe.	28.388	....	28.388
Total miles of sewers...	.....	213.635	4.174	217.809

During the year, 84 catch-basins, 35 extra inlets, and 178 manholes have been built, making a total in use December 31, 1909, of 5,130 catch-basins, 1,855 extra inlets, and 9,434 manholes.

During the quarter, the construction of the following sewers was completed, namely:

No. of resolution.	Date of approval.		Date of completion.
111.	Mar. 19, 1909,	*Ledge street, from Charles to Silver Spring, and in Silver Spring, from Ledge to Northup avenue.*	Dec. 2, 1909.
112.	" " "	*Lena street, from Judith to Latham, and in Latham, from Lena to Plainfield.* . . .	Oct. 16, "

No. of resolution.	Date of approval.		Date of completion.
274.	July 2, 1909,	*Forest street, from Ivy to Hope.*	Oct. 26, 1909.
275.	" " "	*Cumerford street, from Wallace to Union avenue.*	Oct. 12, "
276.	" " "	*Sumter street, from Emerson to Hamilton, and in Richardson street, from near Ocean to Rugby.* .	Nov. 8, "
313.	Sept. 17, "	*Darling street, from near Corliss to West River.* .	Oct. 29, "

Work upon the following sewers was in progress at the close of the quarter, namely:

No. of resolution.	Date of approval.	
277.	July 2, 1909,	*Woonasquatucket District, Section 32, improved sewerage system.*
314.	Sept. 17, "	*Somerset street, from Prairie avenue to Gay street, and in Gay street, from Somerset to Dudley.*
316.	" " "	*Kinsley avenue, from Gaspee street to Eagle.*

Work upon the following sewers, completing the work ordered by the city council, had not commenced December 31, 1909, namely:

No. of resolution.	Date of approval.	
387.	Dec. 17, 1909,	*Rill street, from Allston to Valley, and in Tell street, from a point 80 feet west of Almy to Ridge.*
388.	" " "	*Hart street, from Ivy to Hope.*

SEWER MAINTENANCE DEPARTMENT.

The following table shows the work performed by the department cleaning sewers, basins and drains for the year 1909:

Months.	Old Work.								New Work.										Total deposit removed, cubic yards.
	Old Drains.			Sand-Catchers.		Open Ditches.			Sumps.		Sewers.				Catch-Basins.				
	Number.	Length in feet.	Deposit removed, cu. yards.	Number.	Deposit removed, cu. yards.	Number.	Length in feet.	Deposit removed, cu. yards.	Number.	Deposit removed, cu. yards.	Number.	Length in feet.	Deposit removed, cu. yards.	Dead Ends.	No. times examined.	Number cleaned.	Deposit removed, cu. yards.		
January	....	.....	.....	....	.....	1	190	6.48	28	337.07	40	8,875	66.87	.....	1	200	256.22		666.64
February	....	.....	.....	....	.....	....	.....	.....	15	206.00	98	28,300	109.52	.....	1	108	217.11		532.63
March	....	.....	.....	..	.....	....	.....	.....	14	226.15	165	46,400	93.59	150	1	315	1,794.45		2,114.19
April	1	275	20.00	....	.....	....	.....	.....	16	234.22	21	3,800	32.00	.....	1	884	1,789.78		2,076.00
May	....	.....	.....	7	375.00	....	.....	.....	11	189.11	37	10,400	34.07	69	1	918	1,787.44		2,385.62
June	....	.....	.....	....	.....	....	.....	.....	13	247.45	32	3,000	39.71	.....	1	954	1,668.12		1,955.28
July	1	375	26.25	....	.....	2	275	20.01	22	249.12	32	5,650	61.50	38	1	968	1,547.22		1,904.10
August	....	.....	.....	....	.....	....	.....	.....	17	234.91	9	800	299.00	.....	1	892	1,263.92		1,797.83
September	....	.....	.....	....	.....	2	275	101.85	27	381.41	107	32,475	69.81	107	1	926	1,388.30		1,941.37
October	....	.....	.....	7	350.00	....	.....	.....	8	195.37	99	29,700	26.92	.....	1	1,116	1,353.19		1,925.48
November	....	.....	.....	....	.....	....	.....	.....	12	204.85	12	3,250	36.00	.....	1	941	1,236.44		1,477.29
December	....	.....	.....	....	.....	....	.....	.....	13	241.92	14	980	20.70	.....	1	594	862.23		1,124.85
Totals	2	650	46.25	14	725.00	5	740	128.34	196	2,947.58	663	173,630	889.69	364	12	8,816	15,164.42		19,901.28

Work on Sewers.

Examined six hundred thirty sewers for condition and deposit, also all gates, slots and sumps fifty-two times, and all storm gauges five times. Replaced eighty-three manhole frames and eighty-nine manhole covers. Repaired eighteen sewers, eighty-nine holes over sewers, fourteen manholes, eleven gates, six bulkheads, three house connections, two gate houses, and two gates and two tanks at precipitation tanks. Reset two hundred fifty-eight manhole frames; located steam in two sewers; flushed six-inch overflow pipe eight times; put one new gate in sewer and removed roots from eighty-six sewers. Put in five twelve-inch by six-inch branches and one eight-inch by six-inch branch, also cut in ten six-inch connections, three five-inch connections and one ten-inch connection.

Work on Basins.

Repaired sixty-nine basins, eighty-eight holes over basins, twenty-two chutes, and one hundred ninety-six basins with gravel. Flushed 3,157 chutes and 4,466 traps in basins. Replaced thirty-three basin covers, forty-six traps and three track grates and one frame. Reset ninety-five traps; thawed out one hundred seventy-three chutes and removed snow from 2,330 inlets.

Old Work.

Repaired eight old drains, three bulkheads, one culvert, one ditch and one sidewalk. Leveled nineteen dumps and removed snow from twelve sidewalks. At Ernest street station: pounded and seeded banks; covered deposit with sand three times; and furnished labor for rebuilding pumps. For precipitation tanks: carted lime twice; removed deposit from; cleaned and watched scow. Removed deposit from river at Hawkins street bridge.

Miscellaneous Work.

Flushed sixty house connections, charged $166.75; pumped out cellars, $9.50; altered manholes, etc., supplied water and flushed track grate for Rhode Island Co., $410.78; altered manholes for Narragansett Electric Lighting Co., $4.35, and for Providence Telephone Co., $42.63; extinguished dump fire for Health Department, $267.48, and for H. L. Aldrich, $145.43; puddled ditches for Providence Gas Co., $221.02; cleaned sewer for F. E. Shaw, $16.75; built basins and put connection in for N. Y., N. H. & H. R. R. Co., $160.79; cut in connection for Thomas F. Doyle, $2.00; recovered chain for P. A. Clark, $1.25; built basins and chutes for new city hospital, $765.42.

For Sewer Construction Department: Examined new sewers; took soundings for sewers; built sewer on Ayrault street; altered chutes and basins on Larch street; altered manholes on Temple, Baxter and Cumerford streets, and Home, Ohio and Oakland avenues; pumped out sewer for connection; built twelve basins and five chutes.

For Water Maintenance Department: Removed ashes from Hope station eight times; pounded and seeded banks at Hope reservoir and Sockanosset reservoir; extended drain at Sockanosset reservoir; built fourteen manholes; altered five basin connections; built foundation for a fountain; supplied water; brought manholes to grade and repaired and cleaned drain at Pettaconset pumping station; repaired court at filtration tanks; furnished labor for replacing new pump at Hope station.

For Highway Department: Built three basins, two manholes, two chutes and five hundred and one feet of sewer.

For Bridge Department: Altered two chutes on Branch avenue.

The amount of bills approved on account of sewers, from October 1 to December 31, 1909, inclusive, was:

For construction, ... $87,368 37

Charged as follows:

Material	$13,397 85
Contract reservations	397 00
Sundries	361 99
Additional catch-basins	197 09
Testing cement	192 66
Tools	123 96
Building scow for residue disposal	5,923 49
Sewer in Cumerford street, from Wallace to Union avenue	895 08
Sewer in Darling street, from near Corliss to West River	556 01
Sewer in Dewey and Harvest streets	5 85
Sewer in Forest street, from Ivy to Hope	3,160 65
Sewer in Hope and Savoy streets	155 41
Sewer in Hope street, from Hart to Rochambeau avenue	347 91
Sewer in Kinsley avenue from Gaspee street to Eagle	1,125 44
Sewer in Ledge and Silver Spring streets	4,261 42
Sewer in Lena and Latham streets	845 26
Sewer in Ohio avenue, from Virginia to Eddy street	386 52
Sewer in Sixth and Poplar streets	16 25
Sewer in Somerset and Gay streets	2,004 88
Sewer in Sumter and Richardson streets	1,577 86
Sewer in Woonasquatucket District, Section 32, Division 1	23,992 65
Sewer in Woonasquatucket District, Section 32, Division 2	17,663 02
Sewer in Woonasquatucket District, Section 32, Division 3	9,780 12
	$87,368 37

For maintenance, ... $38,574 82

Classified as follows:

Cleaning basins and sewers	$5,245 99
Repairing basins and sewers	3,426 90
Sundries	1,088 12
Amount carried forward	$9,761 01

Amount brought forward	$9,761 01
Cleaning and repairing old drains	871 47
Inspection of connections	682 64
Barn expenses	595 43
Salary, superintendent	456 57
Tools	326 10
Use of water	300 00
Horses, wagons, harnesses, etc	152 26
Telephone lines	43 93
Office expenses	27 34
Carpenter shop	24 12
Repairs on gate houses	15 59
Cleaning private connections	12 15
Car fares	10 00
Repairs on buildings, sewer maintenance yard	5 05

Ernest Street Station.

Coal and wood	1,588 92
Engineers	819 14
Cleaning screens	632 48
Firemen	588 93
Rebuilding engines and pumps	467 98
Cleaning and repairing pumps	443 29
Repairs on engines	146 45
Care of grounds	120 80
Repairs on buildings	91 76
Supplies	84 05
Lights	31 16
Care of buildings	25 47
Repairs on boilers	3 25

Sewage Precipitation Tanks.

Repairs on scow	6,401 36
Chemicals	5,187 75
Labor in sludge disposal	3,616 17
Miscellaneous supplies	1,592 55
Labor on sewage precipitation	1,391 33
Repairs on wharf	586 06
Electrical power	572 25
Repairs on tanks	336 09
Repairs on buildings	217 77
Fuel	189 29
Repairs on machinery	117 31
Lights	39 55
	$38,574 82

The *net* expenditure for construction of sewers to December 31, 1909, inclusive, was $8,339,256 41

The *net* expenditure for maintenance of sewers to December 31, 1909, inclusive was $1,777,904 41

Bills deposited with the city treasurer for collection from October 1 to December 31, 1909, inclusive, amounted to . . . $2,338 82

As follows:

Miscellaneous work	$1,151 47
Extinguishing fire at dump	145 43
Cleaning private connections	29 00
Electrical power furnished at carpenter shop	22 80
Use of pulsometer	12 00
Second-hand manhole frames and covers	7 00
Sewer material	968 72
Testing cement	2 40
	$2,338 82

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of $2,181 22

As follows:

Miscellaneous work	$985 12
Extinguishing fire at dump	145 43
Cleaning private connections	37 75
Electrical power furnished at carpenter shop	22 80
Use of pulsometer	12 00
Second-hand manhole frames and covers	7 00
Sewer material	968 72
Testing cement	2 40
	$2,181 22

HIGHWAYS.

Two permits to open streets were issued during the quarter.

November 23rd, the proposal of John Catto, of Westerly, to furnish and deliver in the city yard 8,000 square yards of granite blocks for the sum of $1.44 per yard, was accepted and a contract subsequently executed.

Nine hundred and seventy notices to build or repair sidewalks were served on the abutting owners during the year 1909. The work, including one hundred and eleven brought over from the preceding year, was done as follows:

By the abutting owners	816
By the city at the expense of the abutting owners	93
Extension of time granted to	42
Work not done	130

The length of received streets December 31, 1909, was about 241.93 miles measured on street lines and to street line intersection. But, as it is customary in street construction or street paving to complete the work to the curb line intersection, the lengths in the following tables are measured on those lines and sub-divided as follows:

Received streets	248.52 miles.
Streets curbed and built with macadam	172.17 miles.
Streets not curbed, but the roadway macadamized or graveled.	28.49 miles.
Streets curbed and paved	37.32 miles.
Streets received, but not improved	10 54 miles.
Total	248.52 miles.

The actual area of street pavement is 809,201 square yards. If this is estimated to an average width of roadway of 30 feet, it would be equal to 45.98 lineal miles, and is subdivided as follows:

Granite blocks	33.86 miles.
Cobble	4.16 miles.
Asphalt	5.12 miles.
Bitulithic	1.20 miles.
Vulcanite	.39 miles.
Brick	.45 miles.

In addition to the general patching necessary to maintain the streets in good repair, the following work has been done during the year ending December 31, 1909, namely:

New streets built of macadam	13,791.00 linear feet.
Streets paved with new material	3,550.00 linear feet.
Curbing set	26,135.00 linear feet.

Streets rebuilt	5,700.00	linear feet.
Streets resurfaced	144,743.00	linear feet.
Streets graded	7,377.00	linear feet.
Block pavement laid	10,234.8	yards.
Cobble pavement laid	653.3	square yards.
Asphalt pavement relaid	11,234.2	square yards.
Block paving relaid	28,603.5	square yards.
Brick paving relaid	848.9	square yards.
Cobble paving relaid	759.9	square yards.
Concrete sidewalks laid	2,341.7	square yards.
Concrete sidewalks patched and top-dressed	3,494.6	square yards.
Crushed stone used	44,369.35	tons.
Screened gravel used	9,135.00	cubic yards.
Brick pavement laid	450.7	square yards.

Of the above amount of pavement laid and relaid, the cost of laying and relaying 19,112.50 square yards, amounting to $24,920.38 was paid by the corporations for which the work was done.

The following named streets, aggregating 27.41 + miles, have been resurfaced during the year:

Aborn street, from Atwell avenue to West Exchange street.
Acorn street, from Kinsley avenue 700 feet southerly.
Adelaide avenue, from Elmwood to Broad street.
Admiral street, from Oriental to first angle westerly.
Alabama avenue, from Maryland to Broad street.
Ashburton street, from Charles to Chalkstone avenue.
Atwell avenue, from Arthur to Aborn street.
Barnes street, from Brown to Prospect
Bassett street, from Claverick to Elm.
Bates street, from Lippitt to Mallett.
Beacon avenue, from Broad street to Pine.
Beacon avenue, from Lockwood street to Pearl.
Beacon avenue, from Maple street to Point.
Benefit street, from Meeting to Thomas.
Bernon street, from Candace to Nolan.
Blackstone street, from Plain to Allen avenue.
Branch avenue, from Silver Spring street to the railroad bridge.
Broad street, from Adelaide avenue to Parkis.
Brown street, from Hidden to Olney.
Bucklin street, from Greenwich to Potter avenue.
Burgess street, from Cranston to Westminster.
Burrill street, from Westminster to Weybosset.
Camden avenue, from Douglas to Vale street.
Candace street, from Orms to Douglas avenue.

Carpenter street, from Vinton to Jackson.
Chalkstone avenue, from Canton street to Smith.
Charles street, from Branch avenue to city line.
Claverick street, from Bassett to Broad.
Congdon street, from Jenckes 500 feet southerly.
Cooke street, from Angell to George.
Cope street, from Fountain to Sabin.
Darling street, from Corliss to West River.
Davis street, from Orms to Smith.
Dean street, from Fountain to West Exchange.
Dexter street, from Daboll to Potter avenue.
Douglas avenue, from Orms street to Admiral.
Dudley street, from Culver to Plain.
East River street, from South Angell to Waterman.
Eaton street, from Elmhurst avenue to River.
Eddy street, from Broad to Calla.
Edith street, from Holden to Leland.
Elm street, from Eddy to Plain.
Empire street, from Washington to Westminster.
Esten street, from Orms to Smith.
Felix street, from Chalkstone avenue to Valley street.
Forest street, from Hope to Ivy.
Francis street, from Gaspee to Smith.
Franklin street, from Washington to Westminster.
Fruit Hill avenue, from Manton to city line.
George street, from Brook to Thayer.
Greene street, from Fountain to Westminster.
Harris avenue, from Atwell 700 feet westerly.
Harrison street, from Lester to Westfield.
Holden street, from Promenade to Smith.
Hope street, from Pleasant to Rochambeau avenue.
Hope street, from Sixth to Seventh.
Hugo street, from Douglas avenue to city hospital grounds.
Jenckes street, from Congdon to Prospect.
Keene street, from Hope to Prospect.
Laura street, from Broad to Niagara.
Linden street, from Providence to West Clifford.
Lisbon street, from Chalkstone avenue to Regent.
Mallett street, from Bates to Olney.
Manton avenue, from Herschel street to Unit.
Maple street, from Beacon avenue to Plain street.
Maryland avenue, from New York to city line.
Meeting street, from Brown to Prospect.
Meeting street, from Benefit to North Main.
Melrose street, from Adelaide avenue to Potter.
Merino lane, from Hartford avenue 533 feet northerly
Montgomery avenue, from Alabama to Virginia.
Morris avenue, from Cypress street to Savoy.
Morris avenue, from Eames street to Emeline.
Morris avenue, from Hazard to Olney street.
New York avenue, from Maryland to Eddy street.
Niantic avenue, from Cranston street to Neville.

Ocean street, from Public to Thurber avenue.
Ohio avenue, from Virginia to Eddy street.
Olney street, from Hope to Morris avenue.
Orms street, from Black to Smith.
Oxford street, from Broad to Gordon avenue.
Oxford street, from Ocean to Prairie avenue.
Peace street, from Broad to Elmwood avenue.
Pekin street, from Chalkstone avenue to Douglas.
Pitman street, from Governor to Wayland avenue.
Plain street, from Elm to Beacon avenue.
Pleasant street, from Camp to Hope.
Pocasset avenue, from Laurel Hill to city line.
Pond street, from Spring to Stewart.
Potter avenue, from Broad street to Dexter.
Prairie avenue, from Comstock to Willard.
Prairie avenue, from Gallup street to Public.
Prospect street, from Angell to Cushing.
Prospect street, from Barnes to Lloyd avenue.
Providence street, from Pearl to Prairie avenue.
Public street, from Broad to Elmwood avenue.
Public street, from Eddy to Plain.
Roosevelt street, from Laurel Hill avenue to Webster.
Sabin street, from Broadway to Cope street.
Sheldon street, from Benefit to Hope.
Silver Spring street, from Ashton to Northup avenue.
Silver Spring street, from Charles 750 feet northerly.
Smith street, from Canal to Candace.
Smithfield avenue, from Ledge street to city line.
South Angell street, from East River to Paterson.
Spring street, from Pond to Westminster.
State street, from Orms to Smith.
Thayer street, from Power to Waterman.
Thomas street, from Benefit to North Main.
Thurber avenue, from Prairie to Eddy street.
Warren street, from Fuller to Harrison.
Waterman street, from North Main to Prospect.
Waterman street, from Cooke to Butler avenue.
Wayland avenue, frem Angell street to Waterman.
Webster avenue, from Pocasset to Union.
Wesleyan avenue, from Elmwood to 600 feet easterly.
West Clifford street, from Dudley to Point.
Williams street, from Governor to Hope.
Woonasquatucket avenue, from Fruit Hill to city line.

1.39 + miles of streets have been graded during the year, namely:

Dewey street, from Laban to Eastwood avenue.
Eaton street, from Roslyn to River avenue.
Fern street, from Berkeley to Chalkstone avenue.

Fruit Hill avenue, from Woonasquatucket northerly 265 feet.
Hugo street, from Douglas avenue westerly 390 feet.
Huron street, from Regent avenue to Wisdom.
Jillson street, from Broad to Eddy.
Morris avenue, from Cypress street to Savoy.
Poplar street, from Hope to Morris avenue.
Saratoga street, from Baxter to Broad.
Sixth street, from Hope to Summit avenue.
Temple street, from Public to Potter avenue.

1.07 + miles of streets were rebuilt during the year, namely:

Burgess street, from Cranston to Westminster.
Carpenter street, from Dean to Battey.
Edith street, from Holden to Leland.
Elm street, from Eddy to Plain.
Leland street, from Edith to 300 feet southerly.
Meeting street, from Brown to Prospect
Orange street, from Westminster to Weybosset.
Oriental street, from Admiral to Oregon.
Pike street, from Benefit to Traverse.

During the quarter, the following work was completed:

SIDEWALKS CURBED AND GUTTERS PAVED.

Date of order.		
March 18,	1909,	*Oakland avenue, from Eaton street to Smith.*
June 17,	"	*Harvest street, from River avenue to Robin street.*
" "	"	*Sixth street, from Summit avenue to Hope street.*
September 16,	"	*Sumter street, from Emerson to Hamilton.*
" "	"	*Cumerford street, from Wallace to Union avenue.*
" "	"	*Dewey street, from Laban to Eastwood avenue.*
" "	"	*Jillson street, from Broad to Eddy.*

The following work was in progress December 31, 1909:

Sidewalks Curbed and Gutters Paved.

Date of order.	
November 18, 1909,	*Dewey street, east side, from Whittier avenue to Laban street.*

The following work, ordered by the board of aldermen and city council, had not commenced December 31, 1909, namely :

Sidewalks Curbed and Gutters Paved.

Date of order.	
May 20, 1909,	*Ledge street, from Charles to Silver Spring.*
December 16, "	*Hart street, from Hope to Ivy.*
" " "	*Tell street from Almy to Ridge.*

Rebuild.

Date of order.	
June 8, 1909,	*Easterly portion of Exchange place, between Exchange street and the bridge over the river.*

Pave With Granite Blocks.

Date of order.	
November 5, 1909,	*Fountain street, from Dean to a point 50 feet west of Cargill.*

Bills approved on account of highways from October 1 to December 31, 1909, inclusive, amounted to:

Regular appropriation $94,030 71

Classified as follows:

Cleaning streets	$21,953 70
Repairs on paved streets	18,348 09
Repairs on unpaved streets	15,044 07
Crushed stone — material and labor	9,755 81
Amount carried forward	$65,101 67

Amount brought forward	$65,101 67	
Barn expenses	2,937 89	
Blacksmith and wheelwright shop	2,862 93	
Screening gravel	2,139 28	
Stone — paving and crosswalk	1,314 38	
Labor on material	1,203 24	
Tools, implements, etc	706 24	
Steam rollers — repairs and supplies	564 08	
Watering streets	464 77	
Superintendent's salary	422 57	
Repairs on stone crusher	371 00	
Horses, wagons, harnesses, etc	329 74	
Building driveways, etc	199 87	
Office expenses, city yard	191 95	
Watchman at city yard	172 00	
Sundries	141 98	
Fencing streets — material and labor	69 49	
Repairs on buildings, highway yard	64 48	
Car fares	15 00	
Removing stone crusher to Northup avenue	11 44	
Telephone lines	5 60	
		$79,289 60

New Work — Building and Rebuilding Streets, Etc.

Sidewalks Curbed and Gutters Paved.

Cumerford street, from Wallace to Union avenue	$2,004 50	
Dewey street, from Laban to Eastwood avenue	1,122 83	
Dewey street, from Whittier avenue to Laban street	209 70	
Harvest street, from River avenue to Robin street	1,086 67	
Jillson street, from Broad to Eddy	1,365 38	
Oakland avenue, from Eaton street to Smith	3,022 80	
Sixth street, from Summit avenue to Hope street	2,914 47	
Sumter street, from Emerson to Hamilton	3,014 76	
		$14,741 11
		$94,030 71

Bills deposited with the city treasurer for collection from October 1 to December 31, 1909, inclusive, amount to . . . $16,842 63

As follows:

Labor and material	$15,048 68
Blacksmith and harness work for other departments	754 10
Street sweepings	267 25
Amount carried forward	$16,070 03

Amount brought forward	$16,070 03
Rentals for use of public highways	261 68
Boarding horses for other departments	217 60
Building driveways, etc	211 02
Manure from barn	76 00
Empty oil barrels	6 30
	$16,842 63

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for the amount of $6,583 29

As follows:

Labor and material	$4,715 22
Blacksmith and harness work for other departments	743 10
Rentals for use of public highways	360 01
Street sweepings	250 55
Boarding horses for other departments	217 60
Building driveways, etc	214 51
Manure from barn	76 00
Empty oil barrels	6 30
	$6,583 29

SIDEWALKS AND CURBING.

Bills approved on account of sidewalks and curbing from October 1 to December 31, 1909, inclusive, amounted to . . . $6,874 49

Charged as follows:

Granite curbing	$3,187 29
Concreting sidewalks	2,107 36
Repairing sidewalks and gutters	1,579 84
	$6,874 49

Bills deposited with the city treasurer for collection from October 1 to December 31, 1909, inclusive, amounted to . . . .

As follows:

Granite curbing	$87 14
Concreting sidewalks	15 65
	$102 79

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of $85 79

As follows:

Granite curbing	$70 14
Concreting sidewalks	15 65
	$85 79

CITY ENGINEER.

Bills approved on account of the city engineer's department from October 1 to December 31, 1909, inclusive, amounted to $10,738 48

Charged as follows:

Salary, city engineer	$1,125 00
Salaries of assistants	8,132 81
Salaries of clerks	923 89
Supplies, drawing material, etc	290 23
Car fares	202 25
Telephone lines	35 68
Instruments and repairs	27 37
Sundries	1 25
	$10,738 48

BRIDGES.

Bills approved on account of bridges from October 1 to December 31, 1909, inclusive, amounted to $7,163 42

Charged as follows:

Barn expenses	$132 85
Branch avenue bridge, to rebuild	406 23
Building at city yard	5 94
Car fares	25 00
Crawford street bridge	21 75
Geneva bridge	5 38
Horses, wagons, harnesses, etc	57 04
Lumber, hardware, etc	144 82
Mill street bridge	363 42
Point street bridge	342 41
Promenade street bridge	54 88
Red bridge	1,667 42
Rent of keeper's house — Washington bridge	24 00
Salaries — Point street bridge	1,020 75
Salaries — Red bridge	559 21
Salaries — Washington bridge	596 41
Smith street bridge	3 59
Sundries	200 12
Telephone lines	2 68
Tools	89 08
Valley street bridge — north span	136 58
Valley street bridge — south span	32 30
Wanskuck bridge — to rebuild	602 79
Washington bridge	666 69
Washington row bridge	2 08
	$7,163 42

PUBLIC LIGHTS.

Bills approved on account of the public lights from October 1 to December 31, 1909, inclusive, amounted to $68,731 67

Charged as follows:

Arc lights	$48,136 82
Incandescent lights	14,119 74
Welsbach lights	6,313 02
Salaries	135 00
Setting and removing gas posts	27 09
	$68,731 67

Bills deposited with the city treasurer for collection from October 1 to December 31, 1909, inclusive, amounted to $6 00

As follows:

Sale of gas post	$4 00
Removing gas post	2 00
	$6 00

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of $6 00

As follows:

Sale of gas post	$4 00
Removing gas post	2 00
	$6 00

PUBLIC WORKS OFFICE.

Bills approved on account of the public works office from October 1 to December 31, 1909, inclusive, amounted to . . $6,061 47

Charged as follows:

Salaries of commissioner and secretary	$1,925 00
Salaries of office assistants	3,917 97
Office supplies	188 32
Telephone lines	30 18
	$6,061 47

FORESTRY.

Bills approved on account of the forestry department from October 1 to December 31, 1909, inclusive, amounted to . . $2,207 08

Charged as follows:

Salary, city forester	$376 00
Trimming, repairing and removing trees and shrubs	532 75
Amount carried forward	$908 75

Amount brought forward	$908 75
Planting trees in highways	454 05
Barn expenses	389 08
Nursery at Roger Williams park — labor and supplies	346 12
Tools and supplies	69 91
Horses, wagons, harnesses, etc.	39 17
	$2,207 08

Bills deposited with the city treasurer for collection (for trimming trees), from October 1 to December 31, 1909, inclusive, amounted to $3 78

During the quarter, coupons from bills collected (for trimming trees), have been returned by the city treasurer and receipted for to the amount of $3 78

WALTER F. SLADE,

Commissioner.

1910.] CITY DOCUMENT. [No. 9.

ONE HUNDRED AND NINTH

QUARTERLY REPORT

OF THE

Department of Public Works

OF THE

CITY OF PROVIDENCE, R. I.

QUARTER ENDING MARCH 31, 1910.

The Providence Press:
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1910.

REPORT.

OFFICE OF THE DEPARTMENT OF PUBLIC WORKS,
CITY HALL, PROVIDENCE, R. I., April 1, 1910.

TO THE HONORABLE THE CITY COUNCIL:

In compliance with the requirements of Chapter 41 of the ordinances, the Commissioner of Public Works respectfully presents the one hundred and ninth quarterly report of the expenditures by the several departments under his direction and control, with statements of work ordered and the condition and cost of same, for the quarter ending March 31, 1910.

WATER WORKS.

February 11th, the proposal of Henry R. Worthington to furnish and deliver in this city 300 Worthington $\frac{5}{8}$-inch brass model 'D' disc meters without couplings and with straight-reading registers for the sum of $6.35 each was accepted.

The average daily consumption of water during the quarter ending March 31, 1910, was 15,491,314 gallons.

Water pipes were laid during the quarter as follows:

30-INCH.	
In Olney street at Hope station	133.76 feet.
24-INCH.	
In Olney street at Hope station	226.24 feet.
8-INCH.	
In Camp street	12.89 feet.
6-INCH.	
In Edison avenue and in Circuit drive in the town of Cranston	86.38 feet.
Total	459.27 feet.

or .086 + mile.

Water pipes were removed during the quarter as follows:

24-INCH.

From Olney street at Hope station	61.71 feet.

6-INCH.

From Rankin avenue	24.24 feet.
Total	85.95 feet.

or .016 + mile.

Statement of sizes and lengths of pipes, exclusive of the special fire service, laid since the commencement of the work:

42-inch	25,630.70 feet.
36-inch	10,208.82 feet.
30-inch	61,543.83 feet.
24-inch	46,392.99 feet.
20-inch	9,626.59 feet
16-inch	48,779.97 feet.
12-inch	128,276.25 feet.
10-inch	15,054.99 feet.
8-inch	319,301.43 feet.
6-inch	1,326,640.27 feet.
Total	1,991,455.84 feet.

or 377.169 + miles.

Statement of sizes and lengths of pipe laid for the special water service for fire protection since the commencement of the work:

24-inch	4,299.44 feet.
16-inch	40,498.58 feet.
12-inch	6,114.68 feet.
8-inch	625.18 feet.
6-inch	1.02 feet.
Total	51,538.90 feet

or 9.761 + miles.

One fire hydrant was recorded as set in the town of Cranston, viz.:

Cranston street, east side, on range of south line of Hayes street.

The total number of fire hydrants, exclusive of those for special service for fire protection, is now two thousand one hundred and ninety-nine — two thousand and forty-eight flush and one hundred and fifty-one post.

The total number of fire hydrants on the special water service for fire protection is one hundred and thirty-seven.

During the quarter, two hundred and twenty-five meters were set, of which number sixty-four were to replace other meters. The use of eight meters was discontinued.

The following meters were in use at the close of the quarter.

Kind.	Size.									Total.
	⅝-in.	¾-in.	1-in.	1½-in.	2-in.	3-in.	4-in.	6-in.	8-in.	
Ball & Fitts	1,193	236	61	8	2	.....	.....	.....	.....	1,500
Ball & Fitts, rotary	.....	.....	1	.....	.....	.....	1	.....	.....	2
Crown	10,229	1,473	424	194	71	40	36	2	.....	12,469
Empire	2,586	263	101	61	17	1	1	.....	.....	3,030
Fales, Jenks & Sons	.....	.....	1	.....	.....	.....	.....	.....	.....	1
Gem	.....	.....	.....	.....	26	40	21	5	.....	92
Hersey	60	.....	.....	.....	.....	.....	.....	10	.....	70
Nash	644	.....	.....	.....	.....	.....	.....	.....	.....	644
Thomson	5,203	420	75	53	21	7	7	1	.....	5,787
Trident	102	.....	1	.....	.....	.....	.....	.....	.....	103
Venturi	.....	.....	.....	.....	.....	.....	.....	.....	1	1
Worthington	415	.....	.....	.....	.....	.....	.....	.....	.....	415
	20,432	2,392	664	316	137	98	66	18	1	24,114

One hundred and twenty-nine plumber's licenses were issued during the quarter, all of which expire December 31, 1910.

Six hundred and eight permits to do plumbing work were issued during the quarter.

One hundred and eleven applications for water were made during the quarter, making the total number thirty thousand two hundred and thirty-six.

The number of new service stops opened during the quarter was one hundred and seven.

The total number of service stops opened to March 31, 1910, inclusive, was twenty-nine thousand five hundred and seventeen. The number in actual use March 31, 1910, was twenty-seven thousand one hundred and fifty-two.

The amount of bills approved on account of water works from January 1 to March 31, 1910, inclusive, was:

For maintenance, ... $58,543 45

Classified as follows:

PETTACONSET PUMPING STATION.

Coal and wood	$4,105 46	
Sundries	957 34	
Firemen	836 64	
Engineers	607 42	
Superintendence	408 00	
Real estate	278 07	
Oil, waste and packing	168 53	
Care of grounds	120 12	
Barn expenses	85 76	
Labor on fuel	84 84	
Allis-Chalmers high-duty engine	31 24	
Repairs on boilers	19 83	
Horses, wagons, harnesses, etc.	9 60	
Lights	2 48	
		$7,715 33
Amount carried forward		$7,715 33

Amount brought forward		$7,715 33
Sand Filtration Plant.		
Cleaning beds	$2,484 55	
Labor and supplies, pumping	1,680 25	
Laboratory — labor and supplies	576 18	
Miscellaneous supplies	258 19	
Repairs on filter beds	56 29	
		5,055 46
Sockanosset Reservoir.		
Watchman	$168 00	
Sundries	166 36	
		334 36
Hope Pumping Station.		
New engine and boiler, to furnish and erect	$13,127 17	
Engineers	627 00	
Firemen	409 50	
Sundries	97 40	
Lights	50 35	
Repairs on boilers	14 52	
Holly pumping engine	1 81	
		14,327 75
Hope Reservoir.		
Watchman	$189 00	
Sundries	43 50	
		232 50
Fruit Hill Reservoir.		
Sundries	$225 64	
Watchman	168 00	
		393 64
Meter Department.		
Setting and repairing meters	$1,883 27	
Water meters	1,102 47	
		2,985 74
Pipe Line and Service Stops.		
Repairs	$4,973 97	
Salaries of assistant engineers	2,329 00	
Inspection of pipe line and services	2,075 95	
Superintendence—salaries	845 57	
		10,224 49
Amount carried forward		$41,269 27

Amount brought forward		$41,269 27

PIPE YARD.

Stop valves	$2,085 25	
Pig lead and tin	1,877 40	
Special castings	1,620 93	
Laying service pipe	1,438 41	
Special water service for fire protection	1,052 00	
Laying water pipe	959 81	
Fire hydrants, boxes and covers	700 30	
Tools	363 89	
Cast iron water pipe	101 74	
Labor on and carting pipe	71 01	
Pipe yard, office expenses	36 01	
Patterns for special castings	12 00	
		10,318 75

MISCELLANEOUS.

Town of Warwick tax	$3,595 50	
Clerks' and inspectors' salaries	1,606 20	
Barn expenses	820 71	
Horses, wagons, harnesses, etc.	416 08	
Prevention of defilement of the Pawtuxet	300 00	
Telephone lines	123 40	
Car fares	75 00	
Public drinking fountains and troughs	11 50	
Sundries	7 04	
		6,955 43
		$58,543 45

The total expenditures to March 31, 1910, inclusive, was $12,145,324 96

The *net* expenditure for maintenance from January 1, to March 31, 1910, inclusive, was	$49,457 64
The *net* expenditure for maintenance to March 31, 1910, inclusive, was	$4,270,709 94

The value of the water works system January 1, 1910, as estimated by the city engineer, was as follows:

Pettaconset pumping station	$765,694 00	
Hope pumping station	98,674 10	
Sockanosset, Hope and Fruit Hill Reservoirs	661,433 52	
Main lines and distribution pipes	3,112,817 01	
Real estate in Pawtuxet and Lincoln	15,975 00	
Tools and supplies	51,710 26	
		$4,706,303 89

Bills deposited with the city treasurer for collection from January 1 to March 31, 1910, inclusive, amounted to . . . $496,401 54

As follows:

Water	$487,430 98	
Water meters	3,255 00	
Setting and repairing meters	2,139 41	
Labor and material, laying services, etc	1,869 11	
Sale of old metals	1,326 17	
Penalties	190 00	
Rent of real estate	172 60	
Permanently closing service stops	15 00	
Repairs on pipe lines	3 27	
		$496,401 54

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of $488,447 37

As follows:

Water	$479,171 56	
Water meters	3,338 75	
Setting and repairing meters	2,266 81	
Labor and material, laying services, etc	1,952 81	
Sale of old metals	1,326 17	
Penalties	190 00	
Rent of real estate	183 00	
Permanently closing service stops	15 00	
Repairs on pipe line	3 27	
		$488,447 37

SEWERS.

One hundred and thirty nine drain-layer's licenses were issued during the quarter, all of which expire December 31, 1910.

During the quarter one hundred and fifty-two permits were issued to drain layers — fifty-seven for new work and ninety-five for extensions and repairs of drains.

March 17th, assessments for the cost of constructing sewers were certified to the city treasurer as follows:

Forest street, from Ivy to Hope	$2,334 80
Hope street, from Hart to Rochambeau avenue	4,272 52
Hope street, from a point 200 feet southerly of Cypress to Larch, and from about 50 feet north of Larch to Savoy; also in Savoy street, from Hope to Morris avenue	6,229 40
Larch street, from a point 75 feet west of Ivy to Camp, and from near Ivy easterly to Morris avenue	5,600 97
Blackstone boulevard, west side, from Mount avenue to end of present sewer near Upton	1,132 64
Hanover street, from near Elmwood avenue to Bucklin street	1,968 06
Sumter street, from Emerson to Hamilton, and in Richardson from near Ocean to Rugby	4,424 72
Baxter street, from Norwich avenue to Massie, and in Wesleyan avenue, from present end to Elmwood	2,180 46
Sixth street, from a point 140 feet west of Hope to Summit avenue, and in Poplar street, from a point about 90 feet east of Hope to Morris avenue	3,798 66
	$31,942 23

Work upon the following sewers was in progress at the close of the quarter, namely:

No. of resolution.	Date of approval.	
277.	July 2, 1909,	*Woonasquatucket District, Section 32, improved sewerage system.*
314.	Sept. 17, "	*Somerset street, from Prairie avenue to Gay street, and in Gay street, from Somerset to Dudley.*
316.	" " "	*Kinsley avenue, from Gaspee street to Eagle.*

Work upon the following sewers, completing the work ordered by the city council, had not commenced March 31, 1910, namely:

No. of resolution.	Date of approval.	
387.	Dec. 17, 1909,	*Rill street, from Allston to Valley, and in Tell street, from a point 80 feet west of Almy to Ridge.*
388.	" " "	*Hart street, from Ivy to Hope.*

No. of resolution.	Date of approval.	
144.	April 8, 1910,	*Blackstone boulevard, west side, from Mount avenue to present end of sewer about 677 feet north of Rochambeau.*
145.	" " "	*Indiana avenue, from the east line of Virginia to Eddy street, and in Vermont avenue, from Virginia to Eddy street.*
146.	" " "	*Lauriston street, from Hope to Brewster, in Brewster, from Lauriston to Fourth, and in Fourth, from Brewster to Summit avenue.*
147.	" " "	*Raymond street, from a point about 80 feet south of Chalkstone avenue to Ayrault street.*
148.	" " "	*Sassafras street, from Broad to Niagara, and in Woodman, from a point 160 feet westerly from Elmwood avenue to Bucklin street.*
149.	" " "	*Wayland avenue, from the north line of President to Lloyd.*
150.	" " "	*Exchange place, from near Washington row to the end of present sewer in Exchange place about 25 feet west of Exchange street.*
151.	" " "	*Promenade street, from the sewer in Hemlock easterly to a point about 70 feet east of Rathbone.*

The amount of bills approved on account of sewers, from January 1 to March 31, 1910, inclusive, was :

For construction, ... $56,107 22

Charged as follows:

Material	$3,710 39
Contract reservations	949 00
Sundries	286 38
Testing cement	251 26
Additional catch-basins	67 31
Sewer in Kinsley avenue, from Gaspee street to Eagle	4,891 45
Sewer in Somerset and Gay streets	1,330 25
Sewer in Woonasquatucket District, Section 32, Division 1	8,688 59
Sewer in Woonasquatucket District, Section 32, Division 2	18,617 56
Sewer in Woonasquatucket District, Section 32, Division 3	17,315 03
	$56,107 22

For maintenance, ... $24,161 62

Classified as follows:

Repairing basins and sewers	3,254 67
Cleaning basins and sewers	2,992 18
Removing snow and ice from inlets	1,507 36
Tools	817 23
Inspection of connections	597 92
Cleaning and repairing old drains	592 27
Barn expenses	522 77
Salary, superintendent	408 00
Horses, wagons, harnesses, etc	269 87
Office expenses	81 15
Sundries	72 81
Telephone lines	46 29
Carpenter shop	37 92
Filling cisterns, etc	18 12
Cleaning private connections	10 50
Car fares	10 00
Repairs on buildings, sewer maintenance yard	5 07
ERNEST STREET STATION.	
Coal and wood	1,546 14
Cleaning and repairing pumps	1,490 55
Engineers	867 36
Cleaning screens	691 12
Amount carried forward	$15,839 30

Amount brought forward	$15,839 30
Repairs on engines	646 55
Firemen	514 41
Rebuilding engines and pumps	467 02
Repairs on boilers	130 48
Care of grounds	124 71
Supplies	104 61
Lights	37 46
Repairs on buildings	10 95

SEWAGE PRECIPITATION TANKS.

Labor in sludge disposal	2,175 43
Labor on sewage precipitation	1,278 56
Chemicals	1,260 37
Miscellaneous supplies	568 95
Fuel	324 16
Electrical power	265 50
Repairs on buildings	116 99
Repairs on tanks	104 77
Repairs on machinery	78 96
Repairs on wharf	62 32
Repairs on scow	31 52
Lights	18 60
	$24,161 62

The *net* expenditure for construction of sewers to March 31, 1910, inclusive, was $8,395,339 02

The *net* expenditure for maintenance of sewers to March 31, 1910, inclusive, was $1,800,607 38

Bills deposited with the city treasurer for collection from January 1 to March 31, 1910, inclusive, amounted to . . . $1,290 62

As follows:

Sale of old metals and rubber	$942 08
Miscellaneous work	147 69
Pumping out cellars	46 49
Electrical power furnished at carpenter shop	44 96
Use of diaphram pump	40 00
Cleaning private connections	39 75
Laying drains to curbstone	20 04
Sewer material	6 61
Testing cement	3 00
	$1,290 62

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of $1,483 30

As follows:

Sale of old metals and rubber	$942 08
Miscellaneous work	345 41
Pumping out cellars	46 49
Electrical power furnished at carpenter shop	44 96
Use of diaphram pump	40 00
Cleaning private connections	39 75
Laying drains to curbstone	15 00
Sewer material	6 61
Testing cement	3 00
	$1,483 30

HIGHWAYS.

January 24th, the proposal of Crabtree Short & Havey to furnish and deliver in the city yard:

20,000 linear feet of straight granite curbing	@ 54 cents per foot,
100 pieces of 10-foot radius curbing	" 72 cents per foot,
1,000 linear feet of 18-inch crosswalk stone	" 40 cents per foot,
167 linear feet of 14-inch crosswalk stone	" 35 cents per foot,

was accepted and a contract subsequently executed.

Proposals to furnish and deliver the following material were also accepted, viz.:

John Triangolo,	50 pieces of 2-foot curb corners	@	$1.99 each.
	166 linear feet of 14-inch crosswalk stone	"	.35 per foot.
	250 linear feet of 24-inch crosswalk stone	"	.64 " "
Nelson A. Bennett,	50 pieces of 10-foot radius curbing	"	3.25 each.
	250 linear feet of 24-inch crosswalk stone	"	.60 per foot.
Walter H. Thurber & Co.,	167 linear feet of 14-inch crosswalk stone	"	.35 " "

March 14th, a statement was prepared of the cost of curbstones set, ascertained by the commissioner and certified to the board of aldermen for approval, as follows, namely:

Baxter street, from Norwich avenue to Massie	$582 10
Cumerford street, from Wallace to Union avenue	1,395 43
Dewey street, from Laban to Eastwood avenue	292 20
Dewey street, east side, from Whittier avenue to Laban street	157 86
Fern street, from Chalkstone avenue to Berkley street	577 77
Hammond street, east side, from Cranston to Durfee	101 86
Hanover street, from Elmwood avenue to Dexter street	1,303 32
Harvest street, from River avenue to Robin street	558 36
Home avenue, from Chalkstone to Glover street	1,650 52
Huron street, from Wisdom avenue to Regent	424 29
Jillson street, from Broad to Eddy	828 31
Larch street, from Camp to Morris avenue	2,287 52
Lenox avenue, from Hamilton street to Emerson	1,589 93
Oakland avenue, from Eaton street to Smith	2,650 19
Poplar street, from Hope to Morris avenue	598 18
Saratoga street, from Broad to Baxter	877 27
Sixth street, from Summit avenue to Hope street	1,387 15
Sumter street, from Emerson to Hamilton	1,609 84
Temple street, from Public to Potter avenue	656 47
	$19,528 57

The following work was in progress March 31, 1910:

SIDEWALKS CURBED AND GUTTERS PAVED.

Date of order.	
November 18, 1909,	*Dewey street, east side, from Whittier avenue to Laban street.*

The following work, ordered by the board of aldermen and city council, had not commenced March 31, 1910, namely:

SIDEWALKS CURBED AND GUTTERS PAVED.

Date of order.	
May 20, 1909,	*Ledge street, from Charles to Silver Spring.*
December 16, "	*Hart street, from Hope to Ivy.*
" " "	*Tell street, from Almy to Ridge.*
February 17, 1910,	*Sassafras street, from Broad to Niagara.*
" " "	*Rill street, from Allston to Valley.*
" " "	*Baxter street, from Reynolds avenue to Potter.*

REBUILD.

Date of order.

June 8, 1909, *Easterly portion of Exchange place, between Exchange street and the bridge over the river.*

PAVE WITH GRANITE BLOCKS.

November 5, 1909, *Fountain street, from Dean to a point 50 feet west of Cargill.*

GRADE AND PUT IN GOOD CONDITION.

March 17, 1910, *Portions of Charles, Silver Spring and Commodore streets.*

Bills approved on account of highways from January 1 to March 31, 1910, inclusive, amounted to:

Regular appropriation, ... $58,324 90

Charged as follows:

Removing snow and ice	$15,376 32
Crushed stone — material and labor	10,633 33
Cleaning streets	9,923 06
Screening gravel	4,408 90
Blacksmith and wheelwright shop	2,934 84
Barn expenses	2,891 34
Steam rollers — repairs and supplies	2,879 78
Stone — paving and crosswalk	2,194 71
Repairs on unpaved streets	2,063 15
Horses, wagons, harnesses, etc	1,160 76
Labor on material	996 81
Tools, implements, etc	932 97
Repairs on stone crushers	858 05
Superintendent's salary	442 00
Fencing streets — material and labor	184 76
Watchman at city yard	182 00
Office expenses, city yard	95 13
Sundries	76 66
Building driveways, etc	37 01
Repairs on paved streets	32 72
Car fares	15 00
Telephone lines	5 60
	$58,324 90

Bills deposited with the city treasurer for collection from January 1 to March 31, 1910, inclusive, amounted to . . . $14,967 77

As follows:

Rentals for use of public highways	$11,767 37
Labor and material	1,241 89
Blacksmith and harness work for other departments	1,226 83
Boarding horses for other departments	264 78
Street sweepings	264 57
Manure from barn	76 00
Building driveways, etc	54 60
Use of oil cart	51 50
Removing snow and ice	20 23
	$14,967 77

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of $23,474 55

As follows:

Labor and material	$11,527 55
Rentals for use of public highways	10,659 20
Blacksmith and harness work for other departments	584 43
Street sweepings	287 07
Boarding horses for other departments	264 78
Manure from barn	76 00
Building driveways, etc	55 29
Removing snow and ice	20 23
	$23,474 55

SIDEWALKS AND CURBING.

Bills approved on account of sidewalks and curbing from January 1 to March 31, 1910, inclusive, amounted to . . . $1,043 09

Charged as follows:

Concreting sidewalks	$602 08
Granite curbing	350 36
Repairing sidewalks and gutters	90 65
	$1,043 09

Bills deposited with the city treasurer for collection from January 1 to March 31, 1910, inclusive, amounted to . . . $19,579 27

As follows:

Curbing bills	$19,528 57
Concreting sidewalks	31 20
Granite curbing	19 50
	$19,579 27

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of $2,431 84

As follows:

Curbing bills	$2,363 64
Granite curbing	37 00
Concreting sidewalks	31 20
	$2,431 84

CITY ENGINEER.

Bills approved on account of the city engineer's department from January 1 to March 31, 1910, inclusive, amounted to $10,009 62

Charged as follows:

Salary, city engineer	$1,125 00
Salaries of assistants	7,602 86
Salaries of clerks	825 60
Supplies, drawing material, etc	215 08
Car fares	202 35
Telephone lines	35 68
Sundries	3 05
	$10,009 62

BRIDGES.

Bills approved on account of bridges from January 1 to March 31, 1910, inclusive, amounted to $4,534 63

Charged as follows :

Atwells avenue bridge	$7 56
Barn expenses	114 28
Building at city yard	6 13
Cemetery street bridge	3 10
Crawford street bridge	205 13
Eagle street bridge	12 42
Horses, wagons, harnesses, etc	16 22
Lumber, hardware, etc	9 00
Manton bridge	7 05
Manton avenue bridge	5 85
Merino bridge	291 93
Point street bridge	320 77
Post office bridge	13 41
Promenade street bridge	3 11
Red bridge	382 09
Rent of keeper's house — Washington bridge	48 00
Salaries — Point street bridge	1,069 25
Salaries — Red bridge	567 55
Salaries — Washington bridge	570 85
Smith street bridge	29 85
Smithfield avenue bridge	6 88
Sundries	407 48
Telephone lines	2 68
Tools	192 16
Valley street bridge — north span	27 52
Valley street bridge — south span	25 57
Washington bridge	154 71
Washington row bridge	3 10
Weybosset bridge	30 98
	$4,534 63

Bills deposited with the city treasurer for collection (for the sale of paint stock), from January 1 to March 31, 1910, inclusive, amounted to $111 88

During the quarter, coupons from bills collected (for the sale of paint stock), have been returned by the city treasurer and receipted for to the amount of . . . $111

PUBLIC LIGHTS.

Bills approved on account of the public lights from January 1 to March 31, 1910, inclusive, amounted to $68,

Charged as follows:

Arc lights	$47,484 45
Incandescent lights	14,369 19
Welsbach lights	6,357 45
Salaries	84 00
Setting and removing gas posts	10 48
	$68,305 57

PUBLIC WORKS OFFICE.

Bills approved on account of the public works office from January 1 to March 31, 1910, inclusive, amounted to . . . $5,

Charged as follows:

Salaries of commissioner and secretary	$1,925 00
Salaries of office assistants	3,160 26
Office supplies	226 17
Telephone lines	30 18
	$5,341 61

FORESTRY.

approved on account of the forestry
ment from January 1 to March 31,
inclusive, amounted to . . . $1,126 74

arged as follows:

, city forester	$336 00
ing, repairing and removing trees and shrubs	629 96
expenses	114 41
and supplies	29 98
es, wagons, harnesses, etc.	16 39
	$1,126 74

WALTER F. SLADE,

Commissioner.

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Salaries of commissioner and secretary	$1,925 00
Salaries of office assistants	3,160 26
Office supplies	226 17
Telephone lines	30 18
	$5,341 61

FORESTRY.

Bills approved on account of the forestry department from January 1 to March 31, 1910, inclusive, amounted to . . . $1,126 74

Charged as follows:

Salary, city forester	$336 00
Trimming, repairing and removing trees and shrubs	629 96
Barn expenses	114 41
Tools and supplies	29 98
Horses, wagons, harnesses, etc.	16 39
	$1,126 74

WALTER F. SLADE,

Commissioner.

BRIDGES.

Bills approved on account of bridges from January 1 to March 31, 1910, inclusive, amounted to $4,534 63

Charged as follows :

Atwells avenue bridge	$7 56
Barn expenses	114 28
Building at city yard	6 13
Cemetery street bridge	3 10
Crawford street bridge	205 13
Eagle street bridge	12 42
Horses, wagons, harnesses, etc	16 22
Lumber, hardware, etc	9 00
Manton bridge	7 05
Manton avenue bridge	5 85
Merino bridge	291 93
Point street bridge	320 77
Post office bridge	13 41
Promenade street bridge	3 11
Red bridge	382 09
Rent of keeper's house — Washington bridge	48 00
Salaries — Point street bridge	1,069 25
Salaries — Red bridge	567 55
Salaries — Washington bridge	570 85
Smith street bridge	29 85
Smithfield avenue bridge	6 88
Sundries	407 48
Telephone lines	2 68
Tools	192 16
Valley street bridge — north span	27 52
Valley street bridge — south span	25 57
Washington bridge	154 71
Washington row bridge	3 10
Weybosset bridge	30 98
	$4,534 63

Bills deposited with the city treasurer for collection (for the sale of paint stock), from January 1 to March 31, 1910, inclusive, amounted to $111 88

FORESTRY.

Bills approved on account of the forestry department from January 1 to March 31, 1910, inclusive, amounted to . . . $1,126 74

Charged as follows:

Salary, city forester	$336 00
Trimming, repairing and removing trees and shrubs	629 96
Barn expenses	114 41
Tools and supplies	29 98
Horses, wagons, harnesses, etc.	16 39
	$1,126 74

WALTER F. SLADE,

Commissioner.

CITY DOCUMENT

ONE HUNDRED AND TENTH QUARTERLY REPORT

OF THE

epartment of Public Works

OF THE

CITY OF PROVIDENCE, R. I.

QUARTER ENDING JUNE 30, 1910.

The Snowdon Press
Printers to the City of Providence
Providence, R. I.
1910

1910.] CITY DOCUMENT. [No. 10.

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QUARTERLY REPORT

OF THE

Department of Public Works

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The Providence Press:
SNOW & FARNHAM CO., CITY PRINTERS,
63 Washington Street,
1910.

REPORT.

OFFICE OF THE DEPARTMENT OF PUBLIC WORKS,
CITY HALL, PROVIDENCE, R. I., July 1, 1910.

TO THE HONORABLE THE CITY COUNCIL:

In compliance with the requirements of Chapter 41 of the ordinances, the Commissioner of Public Works respectfully presents the one hundred and tenth quarterly report of the expenditures by the several departments under his direction and control, with statements of work ordered and the condition and cost of same, for the quarter ending June 30, 1910.

WATER WORKS.

June 6th, proposals for furnishing the coal required by this department for one year, were accepted and contracts subsequently executed as follows:

For Pettaconsett pumping station about 5,000 tons of bituminous to John R. White & Son, at $3.84 per net ton delivered.

For filtration plant at Pettaconset, about 40 tons of anthracite stove to John R. White & Son, at $6.00 per net ton delivered.

For Hope pumping station, about 875 tons of No. 2 Scranton buckwheat to John R. White & Son, at $2.70 per net ton delivered.

For miscellaneous uses, about 18 tons of anthracite to Eastern Coal Company, at $5.28 per net ton at bidder's yard and about 3 tons of bituminous to Eastern Coal Company, at $3.15 per net ton at bidder's yard.

The average daily consumption of water during the quarter ending June 30, 1910, was 14,993,232 gallons.

Water pipes were laid during the quarter as follows:

24-INCH.

At Hope Pumping station	18.93 feet.

16-INCH.

In Knight and Public streets and Atwells avenue	2,806.06 feet.

12-INCH.

In Public street and Allen avenue	911.64 feet.

8-INCH.

In Hawkins and Public streets	110.96 feet.

6-INCH.

In Adams, Durham, Devonshire, Ivy, Lynn, Lauriston, Longfellow, Magnolia, Porter, Republican, Rugby, Raymond, Waverly and Woodman streets; Hillside, Kensington, Lloyd, Miles, Progress, Rounds, Summit and Wayland avenues; in Division, Norfolk and River streets; Farmington, Grand, Ingleside, Mooreland, Old Oak and Williams avenues in the city of Cranston,	5,598.50 feet.
Total	9,446.39 feet.

or 1.789 + miles.

Water pipes were removed during the quarter as follows:

12-INCH.

From Knight and Public streets and Atwell avenue	29.66 feet.

8-INCH.

From Knight and Public streets and Allen avenue	1,774.93 feet.

6-INCH.

From Public street and Allen avenue	1,028 67 feet.
Total	2,833.26 feet.

or .536 + mile.

Statement of sizes and lengths of pipes, exclusive of the special fire service, laid since the commencement of the work:

42-inch	25,630.70 feet.
36-inch	10,208.82 feet.
30-inch	61,543.83 feet.
24-inch	46,411.92 feet.
20-inch	9,626.59 feet.
16-inch	51,586.03 feet.
12-inch	129,158.23 feet.
10-inch	15,054.99 feet.
8-inch	317,637.46 feet.
6-inch	1,331,210.40 feet.
Total	1,998,068.97 feet.

or 378.422 + miles.

Statement of sizes and lengths of pipe laid for the special water service for fire protection since the commencement of the work:

24-inch	4,299.44 feet.
16-inch	40,498.58 feet.
12-inch	6,114.68 feet.
8-inch	625.18 feet.
6-inch	1.02 feet.
Total	51,538.90 feet.

or 9.761 + miles.

Seven fire hydrants were set during the quarter, one in each of the following locations:

Allen avenue, east side, 11 feet south of Public street.
Bath street, east side, 223 feet north of Calverley.
Hanover street, north side, 283 feet west of Dexter.
Raymond street, east side, 459 feet south of Chalkstone avenue.
Rill street, at southeast corner of Aurora.
Tiffany street, east side, 218 feet north of Chalkstone avenue.
Waldo street, north side, 225 feet west of Sorrento.

The total number of fire hydrants, exclusive of those for special service for fire protection, is now two thousand two hundred and six — two thousand and fifty-five flush and one hundred and fifty-one post.

One fire hydrant was set on the special water service for fire protection, as follows:

Mathewson street, west side, 83.5 feet south of Bewet.

The total number of fire hydrants on the special water service for fire protection is one hundred and thirty-eight.

During the quarter, two hundred and sixty-nine water meters were set, of which number fifty-one were to replace other meters. The use of nine meters was discontinued.

The following meters were in use at the close of the quarter.

Kind.	Size.									Total.
	⅝-in.	¾-in.	1-in.	1½-in.	2-in.	3-in.	4-in.	6-in.	8-in.	
Ball & Fitts	1,172	232	61	8	2	.....	.....	.....	.....	1,475
Ball & Fitts, rotary	.....	.....	....	.....	.....	.....	1	.....	.....	1
Crown	10,252	1,486	429	198	71	40	36	2	.....	12,514
Empire	2,700	270	100	61	17	1	1	.....	.....	3,150
Fales, Jenks & Sons	.....	.....	1	.....	.....	.....	.....	.....	.....	1
Gem	.....	.....	.....	.....	26	42	21	5	.....	94
Hersey	60	.....	.....	.....	.....	.....	.....	10	.....	70
Nash	647	.....	.....	.....	.....	.....	.....	.....	.....	647
Thomson	5,206	422	75	52	21	7	7	1	.....	5,791
Trident	102	.....	1	.....	.....	.....	.....	.....	.....	103
Venturi	.....	.....	.....	.....	.....	.....	.....	.....	1	1
Worthington	476	.....	.....	.....	.....	.....	.....	.....	.....	476
	20,615	2,410	667	319	137	90	66	18	1	24,323

Eight plumber's licenses were issued during the quarter, making the total number one hundred and thirty-seven, all of which expire December 31, 1910.

Seven hundred and thirty-one permits to do plumbing work were issued during the quarter.

Two hundred and fifty applications for water were made during the quarter, making the total number thirty thousand four hundred and eighty-six.

The number of new service stops opened during the quarter was two hundred and thirty-four.

The total number of service stops opened to June 30, 1910, inclusive, was twenty-nine thousand seven hundred and

forty-one. The number in actual use June 30, 1910, was twenty-seven thousand four hundred and forty-two.

The amount of bills approved on account of water works from April 1 to June 30, 1910, inclusive, was:

For maintenance, ... $75,808 87

Classified as follows:

PETTACONSET PUMPING STATION.

Coal and wood	$4,959 86	
Firemen	909 72	
Sundries	863 31	
Engineers	601 77	
Care of grounds	448 35	
Superintendence	442 00	
Oil, waste and packing	231 54	
Labor on fuel	74 55	
Barn expenses	71 79	
Allis-Chalmers high-duty engine	33 85	
Worthington high-duty engine	13 23	
Real estate	10 98	
Lights	10 71	
Corliss pumping engine and house	8 19	
Horses, wagons, harnesses, etc	7 93	
Repairs on boilers	4 31	
		$8,692 09

SAND FILTRATION PLANT.

Cleaning beds	$2,400 65	
Labor and supplies, pumping	1,713 68	
Care of grounds	914 50	
Laboratory — labor and supplies	469 40	
Miscellaneous supplies	234 39	
Repairs on filter beds	69 34	
		5,801 96

SOCKANOSSET RESERVOIR.

Sundries	$470 76	
Watchman	182 00	
		652 76
Amount carried forward		$15,146 81

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of $92,738 20

As follows:

Water	$84,557 51	
Water meters	4,178 25	
Setting and repairing meters	1,880 45	
Labor and material, laying services, etc	1,819 47	
Rent of real estate	108 30	
Removing snow from in front of voting booths	79 42	
Penalties	70 00	
Permanently closing service stops	40 00	
Empty oil barrels	4 80	
		$92,738 20

SEWERS.

Nine drain layers' licenses were issued during the quarter, making the total number one hundred and forty-eight, all of which expire December 31, 1910.

During the quarter, three hundred and thirty permits were issued to drain layers, one hundred and seventy for new work, and one hundred and sixty for extensions and repairs of drains.

During the quarter, assessments for the cost of construc' ing sewers were certified to the city treasurer as follows:

Huron street, from near Wisdom avenue to Regent	$498
Dewey street, from near Laban to Eastwood avenue, and in Harvest street, from a point about 95 feet east of River avenue to Robin street	94:
Union avenue, from a point 300 feet west of Webster to Webster	55
Temple street, from a point about 100 feet north of Potter avenue to Public street	1,2
Saratoga street, from a point about 95 feet east of Broad to Baxter	1
Fern street, from Berkley to Chalkstone avenue	
Cumerford street, from Wallace to Union avenue	2
Lena street, from Judith to Latham, and in Latham, from Lena to Plainfield	1
Amount carried forward	$

Amount brought forward	$9,203 48
Oakland avenue, from Smith street to Eaton	5,961 84
Home avenue, from Chalkstone to Glover street	2,987 62
Darling street, from near Corliss to West River	828 22
Ohio avenue, from Virginia to Eddy street	2,608 25
Ledge street, from Charles to Silver Spring, and in Silver Spring from Ledge to Northup avenue	10,300 56
Section 7,—Bartlett and Melrose streets	160 00
	$32,049 97

During the quarter, contracts for the construction of sewers were awarded and subsequently executed, as follows:

[The amounts given below are what are estimated will be paid the contractors for labor, and do not include the cost of inspection and materials.]

TO FREDERICK E. SHAW.

No. of resolution.	Date of approval.		
144.	April 8, 1910,	*Blackstone boulevard, west side, from Mount avenue to present end of sewer about 677 feet north of Rochambeau avenue,*	$4,162 70
388.	Dec. 17, 1909,	*Hart street, from Ivy to Hope,*	547 00
146.	" " "	*Lauriston, Brewster and Fourth streets,*	554 30
147.	" " "	*Raymond street, from about 80 feet south of Chalkstone avenue to Ayrault street.*	738 00
148.	" " "	*Sassafras and Woodman streets,*	1,[illegible] 20
149.	April 8, 1910,	*Wayland avenue, from north line of President to Lloyd.*	1,[illegible] 40
150.	" " "	*Exchange place.*	[illegible]
185.	May 3, "	*Fisher and Sackett streets.*	[illegible]

TO FRANK A. GAMMINO.

No. of resolution.	Date of approval.		
387.	Dec. 17, 1909,	*Rill and Tell streets,* .	$1,747 04
151.	April 8, 1910,	*Promenade street, from sewer in Hemlock, easterly to a point about 70 feet east of Rathbone,* .	2,360 55

TO CHARLES CRANKSHAW.

145.	April 8, 1910,	*Indiana and Vermont avenues,* . . .	2,321 35

TO MICHAEL A. GAMMINO.

184.	May 3, 1910,	*Hawkins and Loveday streets,* . . .	$787 72

June 6th, the following proposals for furnishing coal to the sewer department for one year were accepted and contracts subsequently executed, viz.:

John R. White & Son, for Ernest street station, about 1,850 tons bituminous at $3.54 per net ton, delivered.
for sewage precipitation tanks, about 75 tons bituminous at $3.79 per net ton, delivered.

Eastern Coal Company, for sewage precipitation tanks, about 65 tons of anthracite at $5.74 per net ton, delivered.
for miscellaneous use, about 21 tons bituminous at $3 15 per net ton, at bidder's yard, and about 17 tons of anthracite at $5.28 per net ton, at bidder's yard.

June 23d, the proposal of Henry Bulkley to furnish and install at Ernest street station, one 10-inch injector condenser with the necessary strainer, elbows, relief valve, etc., for the sum of $475.00, was accepted.

June 24th, the proposal of L. F. Pease Company to furnish and deliver 2,500 yards of 40-inch, 11-ounce standard U. S. army duck at 19¼ cents per yard, was accepted.

During the quarter, the construction of the following sewer was completed, namely:

No. of resolution.	Date of approval.		Date of completion.
314.	Sept. 17, 1909,	*Somerset street, from Prairie avenue to Gay, and in Gay street, from Somerset to Dudley,*	May 23, 1910

Work upon the following sewers was in progress at the close of the quarter, namely:

No. of resolution.	Date of approval.	
277.	July 2, 1909,	*Woonasquatucket District, Section 32, improved sewerage system.*
316.	Sept. 17, "	*Kinsley avenue, from Gaspee street to Eagle.*
387.	Dec. 17, 1909,	*Rill street, from Allston to Valley, and in Tell street, from a point 80 feet west of Almy to Ridge.*
145.	April 8, 1910,	*Indiana avenue, from the east line of Virginia to Eddy street, and in Vermont avenue, from Virginia to Eddy street.*
148.	" " "	*Sassafras street, from Broad to Niagara, and in Woodman, from a point 160 feet westerly from Elmwood avenue to Bucklin street.*
149.	" " "	*Wayland avenue, from the north line of President to Lloyd.*
184.	May 3, "	*Hawkins street, from a point about 80 feet west of Charles to Branch avenue, and in Loveday street, from Admiral, to Veazie.*

Work upon the following sewers, completing the work ordered by the city council, had not commenced June 30, 1910, namely:

No. of resolution.	Date of approval.	
888.	Dec. 17, 1909,	*Hart street, from Ivy to Hope.*
144.	April 8, 1910,	*Blackstone boulevard, west side, from Mount avenue to present end of sewer about 677 feet north of Rochambeau.*
146.	" " "	*Lauriston street, from Hope to Brewster, in Brewster, from Lauriston to Fourth, and in Fourth, from Brewster to Summit avenue.*
147.	" " "	*Raymond street, from a point about 80 feet south of Chalkstone avenue to Ayrault street.*
150.	" " "	*Exchange place, from near Washington row to the end of present sewer in Exchange place about 25 feet west of Exchange street.*
151.	" " "	*Promenade street, from the sewer in Hemlock easterly to a point about 70 feet east of Rathbone.*
185.	May 3, 1910,	*Fisher street, from near Hope to Morris avenue, and in Sackett street, from a point 256 feet west of Broad to Broad.*
252.	June 17, "	*Alabama avenue, from Virginia to Montgomery, in Montgomery from Alabama to Broad street, in New York avenue, from its summit to Eddy street, and in Wayland avenue, from Everett to President.*

The amount of bills approved on account of sewers, from April 1 to June 30, 1910, inclusive, was:

For construction, ... $97,179 56

Charged as follows:

Material	$11,916 53	
Additional catch-basins	989 19	
Contract reservations	853 00	
Sundries	643 57	
Testing cement	210 85	
Tools	56 35	
Sewer in Hawkins and Loveday streets	587 44	
Sewer in Indiana and Vermont avenues	1,000 10	
Sewer in Kinsley avenue, from Gaspee street to Eagle	12,379 79	
Sewer in Rill and Tell streets	673 75	
Sewer in Sassafras and Woodman streets	994 47	
Sewer in Somerset and Gay streets	1,858 67	
Sewer in Wayland avenue, from the north line of President to Lloyd	383 31	
Sewer in Woonasquatucket District, Section 32, Division 1	18,373 63	
Sewer in Woonasquatucket District, Section 32, Division 2	20,152 83	
Sewer in Woonasquatucket District, Section 32, Division 3	26,106 08	
	$97,179 56	

For maintenance, ... $30,876 08

Classified as follows:

Cleaning basins and sewers	$5,688 81	
Repairing basins and sewers	5,083 18	
Cleaning and repairing old drains	927 91	
Tools	907 13	
Inspection of connections	691 08	
Barn expenses	502 77	
Sundries	468 07	
Salary, superintendent	442 00	
Horses, wagons, harnesses, etc	250 92	
Telephone lines	43 93	
Carpenter shop	26 64	
Cleaning private connections	25 62	
Office expenses	25 45	
Filling cisterns, etc	20 48	
Car fares	10 00	
Amount carried forward		$15,113 99

ERNEST STREET STATION.

Amount brought forward		$15,113 99
Rebuilding engines and pumps	$3,178 97	
Coal and wood	1,706 41	
Engineers	988 04	
Cleaning screens	669 44	
Firemen	532 31	
Cleaning and repairing pumps	434 21	
Care of grounds	205 07	
Repairs on engines	133 96	
Supplies	42 59	
Lights	28 14	
Care of buildings	24 93	
Repairs on boilers	6 20	
Repairs on buildings	5 51	

SEWAGE PRECIPITATION TANKS.

Chemicals	2,643 18	
Labor in sludge disposal	2,473 32	
Labor on sewage precipitation	1,707 21	
Electrical power	562 75	
Repairs on machinery	128 32	
Miscellaneous supplies	111 77	
Care of grounds	91 78	
Fuel	36 31	
Repairs on tanks	29 56	
Lights	14 07	
Repairs on buildings	6 60	
Repairs on scow	1 44	
	$30,876 08	

The *net* expenditure for construction of sewers to June 30, 1910, inclusive, was $8,492,392 60

The *net* expenditure for maintenance of sewers to June 30, 1910, inclusive, was $1,831,190 36

Bills deposited with the city treasurer for collection from April 1 to June 30, 1910, inclusive, amounted to $1,266 67

As follows:

Sale of old metals	$842 28
Miscellaneous work	226 69
Cleaning private connections	50 00
Pumping out cellars	23 98
Second-hand manhole cover	1 68
Sewer material	99 52
Laying drains to curbstone	21 42
Testing cement	1 10
	$1,266 67

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of . $419 08

As follows:

Miscellaneous work	$221 19
Cleaning private connections	46 25
Pumping out cellars	23 98
Second-hand manhole cover	1 68
Sewer material	99 52
Laying drains to curbstone	26 46
	$419 08

HIGHWAYS.

Three permits to open streets were issued during the quarter.

June 6th, the following proposals for furnishing the coal required by the highway department for one year were accepted and contracts subsequently executed, namely:

John R. White & Son, about 261 tons of bituminous lump, @ $3.39 per net ton, at bidder's yard.
" " " " " about 35 tons of Georges Creek, @ $3.40 per net ton, at bidder's yard.
" " " " " about 25 tons of anthracite pea, @ $3.65 per net ton, at bidder's yard.
Eastern Coal Company, about 75 tons of anthracite stove and egg, @ $5.28 per net ton, at bidder's yard.

June 10th, the proposals of the following parties to furnish and deliver granite blocks in the city yard were accepted, namely:

Westerly Quarries Company	2500 blocks	@ $1 50 per square yard.
New England Granite Works	2000 square yards	@ $1 58 per square yard.

The proposal of the Connecticut Trap Rock Quarries to furnish and deliver in the city yard 2,000 tons of crushed stone at $1.25 per ton, was accepted and a contract subsequently executed.

During the quarter, the following work was completed:

SIDEWALKS CURBED AND GUTTERS PAVED.

Date of order.	
May 20, 1909,	*Ledge street, from Charles to Silver Spring.*
November 18, "	*Dewey street, east side, from Whittier avenue to Laban street.*
February 17, 1910,	*Baxter street, from Reynolds avenue to Potter.*
May 19, "	*Morris avenue, west side, from Cypress street to Larch.*

PAVE WITH GRANITE BLOCKS.

November 5, 1909,	*Fountain street, from Dean to a point 50 feet west of Cargill.*

The following work was in progress June 30, 1910:

SIDEWALKS CURBED AND GUTTERS PAVED.

Date of order.	
December 16, 1909,	*Tell street, from Almy to Ridge.*
May 19, 1910,	*Rice street, from A to Pearl.*

GRADE AND PUT IN GOOD CONDITION.

March 17, 1910,	*Portions of Charles, Silver Spring and Commodore streets.*

The following work, ordered by the board of aldermen and city council, had not commenced June 30, 1910, namely:

SIDEWALKS CURBED AND GUTTERS PAVED.

Date of order.	
December 16, 1909,	*Hart street, from Hope to Ivy.*
February 17, 1910,	*Sassafras street, from Broad to Niagara.*

Date of order.			
February	17,	1910,	*Rill street, from Allston to Valley.*
May	19,	"	*Loveday street, from Admiral to Veazie.*
"	"	"	*Raymond street, from Chalkstone avenue to Ayrault street.*
"	"	"	*Fourth street, from Summit avenue to Brewster street.*
"	"	"	*Brewster street, from Fourth to Lauriston.*
"	"	"	*Lauriston street, from Brewster to Hope.*
"	"	"	*Woodman street, from Bucklin to Elmwood avenue.*
"	"	"	*Bissell street, from Elmwood avenue westerly to the line of the Auburndale plat.*
"	"	"	*Fisher street, from Hope to Morris avenue.*
"	"	"	*Sackett street, from Broad 256 feet westerly.*
"	"	"	*Wayland avenue, from Lloyd to President.*
June	16,	"	*Allen avenue, from Henderson street to Public.*
"	"	"	*Shepard street, east side, from Carpenter to a point about 95 feet northerly.*

PAVE WITH GRANITE BLOCKS.

June	7,	1910,	*Allen avenue, from Henderson street to Public.*

REBUILD.

June	8,	1909,	*Easterly portion of Exchange place, between Exchange street and the bridge over the river.*

Grade, Build and Improve.

Date of order.

June 7, 1910, *Allen avenue, from Public street to Ernest.*

Remove Obstructions and Put in Good Condition.

June 16, 1910, *Admiral street, from Seamans to Sharon.*

Bills approved on account of highways from April 1 to June 30, 1910, inclusive, amounted to;

Regular appropriation, ... $98,415 45

Charged as follows:

Cleaning streets	$25,854 82	
Repairs on unpaved streets	22,336 07	
Crushed stone — material and labor	10,871 02	
Repairs on paved streets	7,705 92	
Stone — paving and crosswalk	5,661 91	
Barn expenses	2,847 55	
Blacksmith and wheelwright shop	2,672 60	
Watering streets	1,588 59	
Labor on material	873 53	
Tools, implements, etc	854 30	
Fencing streets — material and labor	810 09	
Repairs on stone crushers	711 60	
Steam rollers — repairs and supplies	606 34	
Horses, wagons, harnesses, etc	461 73	
Superintendent's salary	442 00	
Building driveways, etc	317 24	
Watchman at city yard	182 00	
Removing snow and ice	157 92	
Screening gravel	142 35	
Sundries	124 33	
Car fares	40 00	
Office expenses, city yard	35 07	
Telephone lines	5 60	
Amount carried forward		$85,302 58

Amount brought forward		$85,302 58

New Work — Building and Rebuilding Streets, Etc.

Sidewalks Curbed and Gutters Paved.

Baxter street, from Reynolds avenue to Potter	$415 89	
Dewey street, east side, from Whittier avenue to Laban street	184 98	
Ledge street, from Charles to Silver Spring	5,483 15	
Morris avenue, west side, from Cypress street to Larch	945 52	
Rice street, from A to Pearl	890 83	
Tell street, from Almy to Ridge	62 00	
		7,982 37

Pave with Granite Blocks.

Fountain street, from Dean to a point 50 feet west of Cargill		3,238 88

Grade and Put in Good Condition.

Portions of *Charles*, *Silver Spring* and *Commodore streets*		1,891 62
		$98,415 45

Bills deposited with the city treasurer for collection from April 1 to June 30, 1910, inclusive, amounted to $5,630 48

As follows:

Labor and material	$2,109 08
Rentals for use of public highways	1,820 22
Blacksmith and harness work for other departments	830 74
Building driveways, etc	289 66
Boarding horses for other departments	245 13
Street sweepings	214 00
Manure from barn	78 00
Discharging cargoes at city wharf	29 25
Sale of stone drag	8 00
Empty oil barrels	6 40
	$5,630 48

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of $6,743 56

As follows:

Rentals for use of public highways	$2,836 73
Labor and material	2,406 33
Blacksmith and harness work for other departments	654 66
Building driveways, etc	296 31
Boarding horses for other departments	245 13
Street sweepings	190 75
Manure from barn	78 00
Discharging cargoes at city wharf	29 25
Empty oil barrels	6 40
	$6,743 56

SIDEWALKS AND CURBING.

Bills approved on account of sidewalks and curbing from April 1 to June 30, 1910, inclusive, amounted to $7,749 15

Charged as follows:

Granite curbing	$4,282 30
Concreting sidewalks	2,245 22
Repairing sidewalks and gutters	1,221 63
	$7,749 15

Bills deposited with the city treasurer for collection from April 1 to June 30, 1910, inclusive, amounted to $378 14

As follows:

Granite curbing	$328 82
Concreting sidewalks	49 32
	$378 14

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of $7,510 36

As follows:

Curbing bills	$7,128 22
Granite curbing	332 82
Concreting sidewalks	49 32
	$7,510 36

CITY ENGINEER.

Bills approved on account of the city engineer's department from April 1 to June 30, 1910, inclusive, amounted to $10,444 26

Charged as follows:

Salary, city engineer	$1,125 00
Salaries of assistants	7,952 82
Salaries of clerks	924 40
Car fares	201 70
Supplies, drawing material, etc	199 34
Telephone lines	35 68
Sundries	4 52
Instruments and repairs	80
	$10,444 26

BRIDGES.

June 6th, the following proposals for furnishing the coal required by the bridge department during the ensuing year were accepted and contracts subsequently executed, namely:

John R. White & Son, about 100 tons of bituminous lump, at $3.79 per net ton, delivered.

Eastern Coal Company, about 6 tons of anthracite stove and egg, at $5.74 per net ton, delivered.

Bills approved on account of bridges from April 1 to June 30, 1910, inclusive, amounted to $5,029 41

Charged as follows:

Barn expenses	$111 50
Car fares	25 00
Cemetery street bridge	37 76
Charles street railroad bridge	1 60
Crawford street bridge	16 80
Eagle street bridge	11 84
Francis street bridge	150 76
Gaspee street bridge	60 60
Horses, wagons, harnesses, etc	10 95
Lumber, hardware, etc	140 94
Merino bridge	385 60
Mill street bridge	146 60
Park street bridge	28 32
Point street bridge	235 76
Post office bridge	8 96
Promenade street bridge	96
Randall street bridge	14 24
Red bridge	243 45
Rent of keeper's house — Washington bridge	36 00
Salaries — Point street bridge	1,069 25
Salaries — Red bridge	564 85
Salaries — Washington bridge	570 85
Sundries	304 37
Telephone lines	2 68
Tools	122 84
Wanskuck bridge — to rebuild	55 26
Washington bridge	429 44
Washington row bridge	48 92
West river street bridge	5 27
Weybosset bridge	188 04
	$5,029 41

PUBLIC LIGHTS.

Bills approved on account of the public lights from April 1 to June 30, 1910, inclusive, amounted to $69,325 26

Charged as follows:

Arc lights	$48,104 76
Incandescent lights	14,498 01
Welsbach lights	6,431 29
Salaries	273 00
Setting and removing gas posts	18 20
	$69,325 26

PUBLIC WORKS OFFICE.

Bills approved on account of the public works office from April 1 to June 30, 1910, inclusive, amounted to . . . $5,506 87

Charged as follows:

Salaries of commissioner and secretary	$1,925 00
Salaries of office assistants	3,287 46
Office supplies	264 23
Telephone lines	30 18
	$5,506 87

FORESTRY.

Bills approved on account of the forestry department from April 1 to June 30, 1910, inclusive, amounted to $1,554 84

Charged as follows:

Salary, city forester	$364 00
Trimming, repairing and removing trees and shrubs	524 86
Nursery at Roger Williams park — labor and supplies	404 93
Barn expenses	111 95
Planting trees in highways	54 07
Horses, wagons, harnesses, etc	46 14
Tools and supplies	33 29
Spraying trees and shrubs	15 60
	$1,554 84

Bills deposited with the city treasurer for collection (for the sale of trees), from April 1 to June 30, 1910, inclusive, amounted to $12 00

During the quarter, coupons from bills collected (for the sale of trees), have been returned by the city treasurer and receipted for to the amount of	$12 00

WALTER F. SLADE,

Commissioner.

1910. CITY DOCUMENT. [No. 3.

ONE HUNDRED AND ELEVENTH QUARTERLY REPORT

OF THE

Department of Public Works

In conformity with an amendment of the City Ordinances this report will hereafter be issued annually instead of quarterly; the next report being published in January, 1912, for the fiscal year ending September 30th, 1911.

The Providence Press:
SNOW & FARNHAM CO., CITY PRINTERS,
63 Washington Street,
1911.

1910. CITY DOCUMENT.

ONE HUNDRED AND ELEVEN

QUARTERLY REPOR

OF THE

Department of Public W

OF THE

IDENCE, R. I.

PTEMBER 30,

The Providence Press:
Snow & Farnham Co., City Printers,
63 Washington Street,
1911.

REPORT.

OFFICE OF THE DEPARTMENT OF PUBLIC WORKS,
CITY HALL, PROVIDENCE, R. I., October 1, 1910.

TO THE HONORABLE THE CITY COUNCIL:

In compliance with the requirements of Chapter 41 of the ordinances, the Commissioner of Public Works respectfully presents the one hundred and eleventh quarterly report of the expenditures by the several departments under his direction and control, with statements of work ordered and the condition and cost of same, for the quarter ending September 30, 1910.

WATER WORKS.

July 12th, the proposal of the Coffin Valve Company to furnish and deliver in the city yard, one 16-inch Coffin gate valve with 2-inch by-pass for the sum of $95, and two 8-inch special Providence hydrants with boxes, covers and supplementary gates for the sum of $168 each, was accepted.

The average daily consumption of water during the quarter was 16,237,312 gallons, and for the nine months ending September 30, 1910, was 15,576,685 gallons.

Water pipes were laid during the quarter as follows:

12-INCH.

In Allens' avenue	1,214.59 feet.

8-INCH.

In O'Connell, Oxford, Sayles and Sherburne streets	212.89 feet.
Amount carried forward	1,427.48 feet.

Amount brought forward	1,427.48 feet.
6-INCH.	
In Bellingham and Ware courts; Berkshire, Bowlet, Calla, Concannon, Darien, Holmes, Ivy, June, Merino, Ophelia, Sassafras, Simmons and Seymour streets; Carolina, Fort, Farmington, Hillhurst, Kensington, Pinehurst, Rounds and Wayland avenues; in Circuit drive; C, Clemence and Vervena streets; Ingleside, Pontiac, Reservoir, Wellington and Williams avenues and Larkin lane in the city of Cranston; in Larkin lane and Willow street in the town of Johnston; and in Mineral Spring avenue in the town of North Providence	8,775.23 feet.
Total	10,202.71 feet.

or 1.932 + miles.

Water pipes were abandoned during the quarter as follows:

6-INCH.	
In Allens avenue	703.40 feet.

or .133 + mile.

Statement of sizes and lengths of pipe, exclusive of the special fire service, laid since the commencement of the work:

42-inch	25,630.70 feet.
36-inch	10,208.82 feet.
30-inch	61,543.83 feet.
24-inch	46,411.92 feet.
20-inch	9,626.59 feet.
16-inch	51,586.03 feet.
12-inch	130,372.82 feet.
10-inch	15,054.99 feet.
8-inch	317,859.35 feet.
6-inch	1,339,282.23 feet.
Total	2,007,568.28 feet.

or 380.221 + miles.

Water pipes were laid for the special water service for fire protection during the quarter as follows:

16-INCH.	
In Clifford street	881.46 feet.

or .166 + miles.

Statement of sizes and lengths of pipe laid for the special water service for fire protection since the commencement of the work:

24-inch	4,299.44 feet.
16-inch	41,380.04 feet.
12-inch	6,114.68 feet.
8-inch	625.18 feet.
6-inch	1.02 feet.
Total	52,420.36 feet.

or 9.928 + miles.

Twelve fire hydrants were set during the quarter, one in each of the following locations:

Allens avenue, east side, 49 feet north of Bay street.
Allens avenue, east side, 3 feet south of Sherburne street.
Allens avenue, east side, 1 foot south of south line of Sayles street.
Allens avenue, east side, 64.5 feet north of Oxford street.
Allens avenue, east side, 237 feet south of Henderson street.
Brewster street, northeast corner of Fourth.
Blackstone boulevard, west side, 244 feet north of Magellan street.
Hillhurst avenue, north side, 611 feet east of gate at Pocasset.
Ophelia street, east side, 885 feet north of Hartford avenue.
Public street, north side, 5.5 feet east of Eddy.
Seymour street, north side, 450 feet east of Eddy.
Woodman street, south side, 148.5 feet west of Elmwood avenue.

One fire hydrant was removed during the quarter:

From Allens avenue, east side, 43 feet north of Sayles street.

The total number of fire hydrants, exclusive of those for special service for fire protection, is now two thousand two hundred and seventeen — two thousand and sixty-six flush and one hundred and fifty-one post.

Two fire hydrants were set on the special water service for fire protection, as follows:

Clifford street, northwest side, 13 feet northeast of Ship.
Clifford street, northwest side, 4 feet southwest of line of Claverick.

The total number of fire hydrants on the special water service for fire protection is one hundred and forty.

During the quarter, two hundred and ninety meters were set, of which number fifty-three were to replace other meters. The use of four meters was discontinued.

The following meters were in use at the close of the quarter.

Kind.	Size.									Total.
	⅝-in.	¾-in.	1-in.	1½-in.	2-in.	3-in.	4-in.	6-in.	8-in.	
Ball & Fitts	1,136	227	57	8	2	.....	.....	.....	.....	1,430
Ball & Fitts, rotary	.....	.....	.....	.....	.....	.....	1	.....	.....	1
Crown	10,284	1,499	433	203	70	40	37	2	.....	12,568
Empire	2,843	276	102	61	17	1	1	.....	.....	3,301
Fales, Jenks & Sons	.....	.....	1	.....	.....	.....	.....	.....	.....	1
Gem	.....	.....	.....	.....	27	43	21	5	.....	96
Hersey	60	.....	.....	.....	.....	.....	.....	11	.....	71
Nash	647	.....	.....	.....	.....	.....	.....	.....	.....	647
Thomson	5,203	422	75	52	21	7	7	1	.....	5,788
Trident	102	.....	1	.....	.....	.....	.....	.....	.....	103
Venturi	.....	.....	.....	.....	.....	.....	.....	.....	1	1
Worthington	549	.....	.....	.....	.....	.....	.....	.....	.....	549
	20,824	2,424	669	324	137	91	67	19	1	24,556

Two plumber's licenses have been issued during the quarter, making the total number one hundred and thirty-nine, all of which expire December 31, 1910.

Seven hundred and fifty-four permits to do plumbing work were issued during the quarter.

Three hundred and four applications for water were made during the quarter, making the total number thirty thousand seven hundred and ninety.

The number of new service stops opened during the quarter was three hundred and forty.

The total number of service stops opened to September 30, 1910, inclusive, was thirty thousand and three. The number in actual use is twenty-seven thousand seven hundred twenty-seven.

The following table shows the lengths, sizes, etc., of services laid during the nine months ending September 30, 1910:

Months.	Length of Services in Feet.							Number and Size of Taps Used.					Number and Size of Stops Used.					Service Boxes Used.
	Size of Pipe.				Totals.	Total Length of Trenching.	Total Length of Paving.											
	⅝ inch.	¾ inch.	1 inch	1¼ inch.				½ in.	⅝ in.	¾ in.	1 in.	Totals.	½ in.	⅝ in.	¾ in.	1 in.	Totals.	
January	53.4	16.4	7.0	.....	76.8	82.0	20.0	2	3	1	....	6	3	2	1	....	6	7
February	75.4	8.2	7.0	.....	90.6	98.0	26.0	6	1	1	...	8	7	1	1	....	9	9
March	1,150.9	143.4	.....	16.4	1,310.7	1,371.5	157.0	66	8	....	2	76	67	7	....	2	76	78
April	1,403.3	24.6	16.4	.....	1,444.3	1,515.5	209.0	81	3	3	....	87	83	3	2	....	88	89
May	966.2	54.6	.....	.....	1,020.8	1,074.0	158.0	58	4	....	1	63	63	3	....	....	66	68
June	1,122.6	111.0	8.2	.....	1,241.8	1,305.0	144.0	64	8	2	....	74	72	5	1	....	78	82
July	1,338.2	52.6	.....	.....	1,390.8	1,462.0	112.0	79	4	2	1	86	85	3	....	....	88	93
August	995.6	144.4	.....	.....	1,140.0	1,198.0	162.0	58	9	1	2	70	64	8	....	....	72	76
September	1,215.2	82.8	.....	.....	1,298.0	1,356.0	129.0	62	4	1	1	68	68	4	....	....	72	74
Totals	8,320.8	638.0	38.6	16.4	9,013.8	9,462.0	1,117.0	476	44	11	7	538	512	36	5	2	555	576

The following table shows the lengths, sizes, etc., of services laid during the thirty-four years ending September 30, 1910:

YEAR.	Length of Services in Feet.									Taps Used.						Stops Used.						Service Boxes used.
	Sizes of Pipe.						Totals.	Trenching.	Paving.													
	½ inch.	⅝ inch.	¾ inch.	1 inch.	1¼ inch.	1½ inch.				⅜ in.	½ in.	⅝ in.	¾ in.	1 in.	To-tals.	⅜ in.	½ in.	⅝ in.	¾ in.	1 in.	To-tals.	
To Dec. 31, 1909.....	9,919.9	293,665.08	26,294.99	5,752.2	4,471.9	457.7	340,561.77	358,168.79	43,114.28	612	17,575	2,003	520	417	21,127	645	18,760	1,669	358	336	21,768	22,398
9 mos. ending Sept. 30, 1910..	.....	8,320.80	638.00	38.6	16.4	.....	9,013.80	9,462.00	1,117.00	....	476	44	11	7	538	....	512	36	5	2	555	576
Totals....	9,919.9	301,985.88	26,932.99	5,790.8	4,488.3	457.7	349,575.57	367,630.79	44,231.28	612	18,051	2,047	531	424	21,665	645	19,272	1,705	363	338	22,323	22,974

Changes in Size and Location of Services in 1910.

Taps and Stops.										Sizes and Lengths of Lead Pipe.															
Taken Out.					Inserted.					Taken Out.						Inserted.					Trenching.	Paving.	Change in size only.	Change in location only.	Change in both size and location.	Relaid.
$\frac{3}{8}$ inch.	$\frac{1}{2}$ inch.	$\frac{5}{8}$ inch.	$\frac{3}{4}$ inch.	1 inch.	$\frac{3}{4}$ inch.	$\frac{1}{2}$ inch.	$\frac{5}{8}$ inch.	$\frac{3}{4}$ inch	1 inch.	$\frac{1}{2}$ inch.	$\frac{5}{8}$ inch	$\frac{3}{4}$ inch.	1 inch.	$1\frac{1}{4}$ inch.	$1\frac{1}{2}$ inch.	$\frac{5}{8}$ inch.	$\frac{3}{4}$ inch.	1 inch.	$1\frac{1}{4}$ inch.	$1\frac{1}{2}$ inch.						
72	47	11	4	3	.....	39	13	4	8	1,073.3	694.9	223.8	59.8	69.6	.....	612.9	170.7	62.0	164.7	.....	2464.5	1083.5	51	5	3	5

78 services have been removed.
During the nine months 119 taps were dug up and examined.
116 were cleaned and 3 were found unobstructed.
21 private taps were inserted

The following table exhibits the number of service stops opened each month from the commencement to September 30, 1910:

MONTHS.	1871.	1872.	1873.	1874.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1889.	1890.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.	1910.
January...	..	54	33	21	34	55	15	49	9	20	7	17	15	21	17	18	26	7	39	36	39	56	40	29	30	27	30	40	18	24	18	27	23	19	24	26	28	21	28	43
February..	..	47	18	18	7	25	23	18	9	19	3	11	9	10	7	15	7	10	21	25	26	23	24	28	8	28	24	21	7	15	10	18	26	12	11	26	16	12	25	17
March.....	..	38	34	63	7	45	32	60	19	46	23	39	11	28	9	24	16	14	19	28	24	28	36	40	27	40	42	46	28	30	24	39	35	12	20	40	22	31	45	47
April..	..	109	109	108	32	108	82	78	52	58	55	49	55	62	48	68	60	38	61	53	73	76	71	76	67	100	70	53	69	47	73	73	60	58	60	57	50	47	59	82
May.	..	224	206	147	162	168	136	95	80	84	66	72	78	62	62	61	70	52	74	66	114	83	91	81	79	98	82	51	73	60	67	52	70	76	80	71	78	62	69	78
June.....	..	329	295	151	172	148	114	103	71	109	82	48	64	81	81	59	50	86	59	80	83	103	106	105	100	76	86	61	73	60	96	71	58	67	75	68	72	96	60	64
July.....	..	333	261	127	141	158	83	80	49	75	56	77	66	76	77	83	62	89	74	67	85	105	93	80	89	83	59	51	66	44	81	74	59	80	73	45	73	51	74	71
August....	..	224	209	123	83	94	91	51	51	39	58	87	69	61	57	71	49	52	56	76	95	104	115	116	83	64	69	54	80	66	78	62	57	52	75	65	83	56	84	104
September	..	184	147	139	101	94	80	63	44	37	60	67	93	50	70	59	74	63	64	77	93	114	88	112	70	71	67	53	53	76	72	56	72	61	56	71	51	82	79	87
October....	..	138	135	160	92	84	81	78	79	48	61	56	47	65	62	52	80	70	64	54	104	102	96	85	90	70	62	47	54	65	66	43	58	66	64	77	74	64	71	...
November.	..	100	104	185	86	54	73	57	63	54	37	64	49	51	39	57	69	47	58	72	81	118	80	70	68	52	54	42	45	54	63	55	48	58	60	66	70	73	82	...
December.	56	83	45	122	60	35	55	45	47	29	40	27	56	44	46	28	49	42	53	50	83	102	62	62	57	58	53	47	40	56	44	46	43	51	48	40	41	63	66	...
...ls...	56	1863	1596	1364	977	1068	865	777	573	618	548	614	612	611	575	596	612	570	642	684	900	1014	902	884	768	747	698	566	606	597	692	616	612	612	646	652	658	658	762	593

The receipts for water each year since the commencement have been as follows:

Year.	Amount.	Year.	Amount.
1872	$41,003 51	1892	$409,421 21
1873	97,386 09	1893	427,546 51
1874	132,052 39	1894	432,383 97
1875	165,144 71	1895	471,069 97
1876	183,868 73	1896	485,187 33
1877	200,039 39	1897	490,652 47
1878	218,883 33	1898	502,603 10
1879	229,551 78	1899	522,124 46
1880	247,705 06	1900	554,949 62
1881	260,530 87	1901	578,869 07
1882	269,318 77	1902	605,307 35
1883	283,632 89	1903	621,016 74
1884	302,368 36	1904	670,700 90
1885	313,561 21	1905	673,252 97
1886	323,084 67	1906	691,459 12
1887	339,513 60	1907	741,487 03
1888	346,731 58	1908	717,752 39
1889	377,497 97	1909	710,272 98
1890	401,140 86	1910 (to Sept. 30)	645,082 59
1891	404,553 84		

The amount of bills approved on account of water works from July 1 to September 30, 1910, inclusive, was:

For maintenance, ... $48,934 20

Classified as follows:

PLEASANT STREET PUMPING STATION.

Coal and wood	$4,953 26
Sundries	985 70
Firemen	980 28
Engineers	667 18
Amount carried forward	$7,586 42

Amount brought forward	$7,586 42	
Superintendence	466 28	
Oil, waste and packing	225 75	
Care of grounds	207 48	
Allis-Chalmers high-duty engine	120 92	
Repairs on boilers	102 33	
Labor on fuel	75 60	
Barn expenses	64 59	
Horses, wagons, harnesses, etc.	37 83	
Lights	5 09	
		$8,892 29

SAND FILTRATION PLANT.

Cleaning beds	$2,458 36	
Labor and supplies, pumping	1,981 55	
Laboratory — labor and supplies	531 22	
Miscellaneous supplies	312 29	
Repairs on filter beds	175 20	
Repairs on buildings	18 48	
		5,477 10

SOCKANOSSET RESERVOIR.

Watchman	$194 00	
Sundries	192 80	
		386 80

HOPE PUMPING STATION.

Coal and wood	$1,193 80	
New engine and boiler, to furnish and erect	734 99	
Engineers	707 79	
Firemen	436 50	
Sundries	286 16	
Repairs on boilers	72 11	
Lights	68 07	
Oil, waste and packing	36 39	
Holly pumping engine	3 47	
		3,539 28

HOPE RESERVOIR.

Sundries	$228 50	
Watchman	220 00	
		448 50

FRUIT HILL RESERVOIR.

Sundries	$194 32	
Watchman	194 00	
		388 32
Amount carried forward		$19,132 29

Amount brought forward		$19,132 29

METER DEPARTMENT.

Water meters	$4,737 25	
Setting and repairing meters	1,445 42	
		6,182 67

PIPE LINE AND SERVICE STOPS.

Repairs	$3,851 31	
Salaries of assistant engineers	2,840 02	
Inspection of pipe line and services	1,456 47	
Superintendence—salaries	962 88	
		9,110 74

PIPE YARD.

Laying water pipe	$5,406 26	
Laying service pipe	2,138 33	
Special water service for fire protection	1,666 67	
Special castings	799 74	
Service pipe	451 27	
Labor on and carting pipe	200 30	
Tools	174 83	
Repairs on pipe yard buildings	156 29	
Fire hydrants, boxes and covers	50 73	
Pipe yard, office expenses	12 41	
		11,056 83

MISCELLANEOUS.

Clerks' and inspectors' salaries	$1,841 39	
Barn expenses	675 58	
Horses, wagons, harnesses, etc.	305 60	
Prevention of defilement of the Pawtuxet	300 00	
Car fares	150 00	
Telephone lines	122 68	
Real estate in Lincoln	31 25	
Public drinking fountains and troughs	23 67	
Inspection of water pipe with reference to electrolysis	1 50	
		3,451 67
		$48,934 20

The total expenditures to September 30, 1910, inclusive, was $12,270,068 03

The *net* expenditure for maintenance from July 1, to September 30, 1910, inclusive, was $40,349 81

The *net* expenditure for maintenance to September 30, 1910, inclusive, was $4,378,757 93

The value of the water works system January 1, 1910, as estimated by the city engineer, was as follows:

Pettaconsett pumping station	$765,694 00	
Hope pumping station	98,674 10	
Sockanosset, Hope and Fruit Hill reservoirs	661,433 52	
Main lines and distribution pipes	3,112,817 01	
Real estate in Pawtuxet and Lincoln	15,975 00	
Tools and supplies	51,710 26	
		$4,706,303 89

Bills deposited with the city treasurer for collection from July 1, to September 30, 1910, inclusive, amounted to . . . $91,428 74

As follows:

Water	$82,837 36	
Water meters	5,215 35	
Setting and repairing meters	1,978 12	
Labor and material, laying services, etc.	1,202 35	
Rent of real estate	100 50	
Penalties	58 00	
Repairs on pipe line	22 26	
Permanently closing service stops	10 00	
Empty oil barrels	4 80	
		$91,428 74

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of, $89,995 91

As follows:

Water	$81,353 52	
Water meters	4,931 90	
Setting and repairing meters	2,344 66	
Labor and material, laying services, etc.	1,182 77	
Rent of real estate	88 00	
Penalties	58 00	
Repairs on pipe line	22 26	
Permanently closing service stops	10 00	
Empty oil barrels	4 80	
		$89,995 91

The amount of bills approved on account of water works for the fiscal year ending September 30, 1910, inclusive, was:

For maintenance, ... $249,406 71

Classified as follows:

PETTACONSET PUMPING STATION.

Coal and wood	$18,502 05	
Sundries	3,786 05	
Firemen	3,656 52	
Engineers	2,492 45	
Superintendence	1,772 85	
Care of grounds	952 77	
Oil, waste and packing	834 53	
Repairs on boilers	635 18	
Real estate	328 95	
Labor on fuel	303 03	
Barn expenses	290 28	
Allis-Chalmers high-duty engine	206 17	
Horses, wagons, harnesses, etc.	57 22	
Lights	40 17	
Worthington high-duty engine	13 23	
Corliss pumping engine and house	8 69	
		$33,880 14

SAND FILTRATION PLANT.

Cleaning beds	$9,435 28	
Labor and supplies, pumping	7,284 07	
Laboratory—labor and supplies	2,319 07	
Miscellaneous supplies	956 77	
Care of grounds	914 50	
Installation	728 32	
Repairs on beds	300 83	
Repair on buildings	44 23	
		21,983 07

SOCKANOSSET RESERVOIR.

Sundries	$1,367 74	
Watchman	716 00	
		2,083 74
Amount carried forward		$57,946 95

Amount brought forrward		$57,946 95
Hope Pumping Station.		
New engine and boiler, to furnish and erect	$23,746 11	
Engineers	2,667 36	
Coal and wood	1,909 81	
Firemen	1,642 50	
Sundries	840 89	
Lights	218 70	
Repairs on boilers	109 67	
Oil, waste and packing	78 92	
Care of grounds	60 00	
Holly pumping engine	31 28	
		31,305 24
Hope Reservoir.		
Sundries	$1,002 84	
Watchman	825 25	
		1,828 09
Fruit Hill Reservoir.		
Sundries	$1,352 74	
Watchman	730 00	
		2,082 74
Meter Department.		
Water meters	$15,082 95	
Setting and repairing meters	6,632 20	
		21,720 15
Pipe Line and Service Stops.		
Repairs	$16,633 41	
Salaries of assistant engineers	9,450 83	
Inspection of pipe line and services	6,356 11	
Superintendence — salaries	3,664 00	
		36,104 35
Pipe Yard.		
Laying water pipe	$17,969 51	
Cast-iron water pipe	17,819 22	
Special water service for fire protection	8,373 79	
Laying service pipe	7,101 85	
Special castings	3,831 52	
Leading main from Sockanosset to city, to lay	3,350 00	
Service pipe	3,186 71	
Pig lead and tin	2,556 67	
Stop valves	2,099 22	
Taps and stops	1,312 97	
Tools	1,046 02	
Amounts carried forward	$68,647 48	$150,987 52

Amounts brought forward	$68,647 48	$150,987 52
Labor on and carting pipe	972 87	
Fire hydrants, boxes and covers	765 00	
Repairs on pipe yard buildings	179 04	
Pipe yard, office expenses	122 53	
Patterns for special castings	12 00	
		70,698 92
MISCELLANEOUS.		
City of Cranston tax	$9,616 62	
Salaries of clerks and inspectors	7,108 22	
Town of Warwick tax	3,595 50	
Barn expenses	3,214 57	
Horses, wagons, harnesses, etc.	1,423 70	
Prevention of defilement of the Pawtuxet	1,200 00	
Car fares	575 00	
Telephone lines	487 17	
Town of North Providence tax	400 00	
Public drinking fountains and troughs	50 33	
Real estate in Lincoln	31 25	
Sundries	15 16	
Inspection of water pipe with reference to electrolysis	2 75	
		27,720 27
		$249,406 71

SEWERS.

Two drain layer's licenses were issued during the quarter, making the total number one hundred and fifty, all of which expire December 31, 1910.

During the quarter, three hundred and seventy-three permits were issued to drain layers, two hundred and twenty for new work, and one hundred and fifty-three for extensions and repairs of drains.

During the quarter, contracts for the construction of sewers were awarded and subsequently executed, as follows:

[The amounts given below are what are estimated will be paid the contractors for labor, and do not include the cost of inspection and materials.]

To FREDERICK E. SHAW.

No. of resolution.	Date of approval.		
262.	July 8, 1910.	*Camp street, from Pleasant about 150 feet northerly,*	$800 00

TO FRANK A. GAMMINO.

No. of resolution.	Date of approval.		
252.	June 17, 1910,	*Alabama avenue, from Virginia to Montgomery; in Montgomery, from Alabama to Broad street; in New York avenue, from its summit to Eddy street, and in Wayland avenue, from Everett to President,*	$3,311 30

August 5th, the proposal of William M. Harris, Jr., to furnish and deliver in the city yard 500,000 bricks at $7.49 per M. was accepted and a contract subsequently executed.

August 19th, the proposal of the Providence Engineering Works to change the rope drives of the pumps at Ernest Street station for the sum of $869.00 was accepted.

SEWERS CONSTRUCTED TO SEPTEMBER 30, 1910, IN MILES.

ITEMS.	KIND.	Built previous to 1910. Miles.	Built during 1910 to Sept. 30. Miles.	Total to September 30, 1910. Miles.
Under regular appropriation	Brick.	43.842	2.624	46.466
Under regular appropriation	Pipe.	145.579	2.030	147.609
Under improved sewerage appropriation	Brick and Pipe	28.388	.....	28.388
Total miles of sewers	.....	217.809	4.654	222.463

During the year 57 catch-basins, 17 extra inlets and 217 manholes have been built, making a total in use September 30, 1910 of 5,187 catch-basins, 1,872 extra inlets and 9,651 manholes.

During the quarter, the construction of the following sewers was completed, namely:

No. of resolution.	Date of approval.		Date of completion.
387.	Dec. 17, 1909,	*Rill street, from Allston to Valley, and in Tell street, from a point 80 feet west of Almy to Ridge*	Sept. 7, 1910
388.	" " "	*Hart street, from Ivy to Hope,*	Sept. 8, 1910
145.	April 8, 1910,	*Indiana avenue, from the east line of Virginia to Eddy street, and in Vermont avenue, from Virginia to Eddy street.*	Aug. 9, 1910
147.	" " "	*Raymond street, from a point about 80 feet south of Chalkstone avenue to Ayrault street* . .	Aug. 25, 1910
148.	" " "	*Sassafras street, from Broad to Niagara, and in Woodman, from a point 160 feet westerly from Elmwood avenue to Bucklin street* . , .	Aug. 5, 1910
149.	" " "	*Wayland avenue, from the north line of President to Lloyd* . . .	July 28, 1910
184.	May 3, "	*Hawkins street, from a point about 80 feet west of Charles to Branch avenue, and in Loveday street, from Admiral, to Veazie*	July 26, 1910

No. of resolution.	Date of approval.		Date of completion.
185.	May 3, 1910,	*Fisher street, from near Hope to Morris avenue, and in Sackett street, from a point 256 feet west of Broad to Broad.*	Sept. 15, 1910.

Work upon the following sewers was in progress at the close of the quarter, namely:

No. of resolution.	Date of approval.	
277.	July 2, 1909,	*Woonasquatucket District, Section 32, improved sewerage system.*
316.	Sept. 17, "	*Kinsley avenue, from Gaspee street to Eagle.*
144.	April 8, 1910,	*Blackstone boulevard, west side, from Mount avenue to present end of sewer about 677 feet north of Rochambeau.*
146.	" " "	*Lauriston street, from Hope to Brewster; in Brewster, from Lauriston to Fourth, and in Fourth, from Brewster to Summit avenue.*
150.	" " "	*Exchange place, from near Washington row to the end of present sewer in Exchange place about 25 feet west of Exchange street.*
252.	June 17, "	*Alabama avenue, from Virginia to Montgomery; in Montgomery from Alabama to Broad street: in New York avenue, from its summit to Eddy street, and in Wayland avenue, from Everett to President.*
262.	July 8, "	*Camp street, from Pleasant about 150 feet northerly.*

Work upon the following sewers, completing the work ordered by the city council, had not commenced September 30, 1910, namely:

No. of resolution.	Date of approval.	
151.	April 8, 1910,	*Promenade street, from sewer in Hemlock easterly to a point about 70 feet east of Rathbone.*
354.	Oct. 4, "	*Silver Lake avenue, from Plainfield street to Union avenue; in Union avenue, from Silver Lake to Pocasset, and in Whittier avenue, from near Laurel Hill to present end of sewer in Whittier avenue 100 feet west of Ralph street.*
355.	" " "	*Everett avenue, from Cole to Wayland.*
356.	" " "	*Allens avenue, from Bay street to Public, and in right of way in Public street from Allens avenue to tidewater.*
357.	" " "	*Rodman street, from Sackett to Niagara.*
358.	" " "	*Atwells avenue, from near the bridge over the Woonasquatucket river easterly to Ericsson place, and through said place northerly to the Woonasquatucket river, thence by the wall of said river easterly about 300 feet, thence to the sewer now constructed in Kinsley avenue.*

SEWER MAINTENANCE DEPARTMENT.

The following table shows the work performed by the department in cleaning sewers, basins and drains for the year 1910:

Month.	Old Work.								New Work.										Total deposit removed, cubic yards.
	Old Drains.			Sand-Catchers.		Open Ditches.			Sumps.		Sewers.				Basins.				
	Number.	Length in feet.	Deposit removed, cu. yards.	Number.	Deposit removed, cu. yards.	Number.	Length in feet.	Deposit removed, cu. yards.	Number.	Deposit removed, cu. yards.	Number.	Length in feet.	Deposit removed, cu. yards.	Dead Ends.	Times examined.	Number cleaned.	Deposit removed, cu. yards.		
January	....	.....	.....	....	.....	....	.....	.....	22	231.19	11	.....	24.89	.....	.....	23	53.85		309.93
February	....	.....	.....	....	.....	....	.....	.....	15	258.56	12	.....	15.41	.....	1	143	222.92		496.89
March	....	.....	.....	12	36.00	....	.....	.....	15	260.41	102	27,000	118.03	60	1	480	1,138.26		1,552.70
April	....	.....	.....	....	.....	....	.....	.....	13	231.69	13	1,200	41.29	.....	1	486	1,168.52		1,441.50
May	....	.....	.....	....	.....	....	.....	.....	17	243.00	30	4,600	41.30	.....	2	554	1,429.85		1,714.15
June	....	.....	.....	....	.....	....	.....	.....	12	193.77	14	1,500	50.68	....	1	532	1,314.38		1,558.83
July	....	.....	.....	....	.....	....	.....	.....	19	230.37	16	.....	37.93	.....	1	799	1,811.56		2,079.86
August	....	.....	.....	....	.....	....	.....	.....	18	324.30	15	1,950	45.07	.....	1	873	2,028.91		2,398.28
September	....	.....	.....	....	.....	....	.....	.....	14	222.89	36	18,000	153.19	60	1	1,036	2,339.55		2,715.63
Total	....	.....	.....	12	36.00	....	.....	.....	145	2,196.18	289	54,250	527.79	120	9	4,926	11,507.80		14,267.77

Work on Sewers.

Examined two hundred sixty-five sewers for condition and deposit, also all gates, slots and sumps forty-five times, and all storm gauges four times. Replaced ninety-six manhole frames and covers, and reset two hundred seventy-five manhole frames. Repaired seven sewers, seventy-three holes over sewers, four manholes, nine gates, and four house connections. Put in nine twelve-inch by six-inch branches and one eight-inch by six-inch branch, also cut in nine six-inch connections. Rebuilt sewer in Roger Williams park; closed and opened gates in sewers twenty-nine times and pumped out sewer in Allens avenue.

Work on Basins.

Repaired thirty basins, sixty-two holes around basins, thirty-three chutes, and eight basin connections. Flushed 1,462 chutes and 2,262 traps in basins. Reset seventy-five traps, and replaced eleven basin covers. Removed snow from 7,742 inlets and thawed out ninety-nine chutes.

Old Work.

Repaired four old drains and one old well. Leveled fifteen dumps and removed snow from nine sidewalks. At Ernest street station: repaired and seeded banks; removed two old pumps; covered deposit with sand three times; and altered and repaired intake. For precipitation tanks: carted filter cloth three times, also carted street sweepings.

Miscellaneous Work.

Flushed forty-four house connections, charged $121.25; pumped out cellars, $51.46; altered manholes, cut in connection, and supplied water for Rhode Island Co. in sundry streets, $273.20; thawed out trench, puddled ditches, and altered connections for Providence Gas Co., $566.20; altered manholes in Washington and Waterman streets for Providence Telephone Co., $11.00; repaired drain in Valley street for National & Providence Worsted Mills, $15.67; built basin in Fountain street for Pearson Bros., $22.68; altered basin in Leland street for Brown & Sharpe Mfg. Co., $8.78; altered manholes for Narragansett Electric Lighting Co., $7.50; built basins in Allens avenue and cut in connection in Bell street for N. Y. N. H. & H. R. R. Co., $155.31.

For Water Maintenance Department: Removed ashes from Hope station eight times; removed engine and pump, built piers and repaired floors, etc., for new engine at Hope station; built manholes, repaired basin connections, and pumped out ditch for fire protection; thawed out ditch on Olney street; pounded and seeded banks at Hope reservoir, Pettaconset pumping station, and Sockanosset reservoir; flushed three drinking fountains and repaired one.

For Sewer Construction Department: Built two manholes, seven basins, five chutes, sewer in Kinsley avenue, and storm sewer in Brayton avenue; altered manholes in Vermont avenue, manholes and basins in Raymond street, and chute in Rill street; examined new sewers; laid connection to curb in Hope street and Rochambeau avenue, and excavated for rock in Sixth and Forest streets.

For Highway Department: Altered basin in Wendell street, basin, etc., in Peck street, basins and manholes in Allens avenue; built chutes and altered manholes in Charles street, and built wall in Tell street.

For Contingencies: Furnished labor for cleaning river at Gaspee street.

The amount of bills approved on account of sewers from July 1 to September 30, 1910, inclusive, was:

For construction, ... $103,755.99

Charged as follows:

Material	$8,162 69
Additional catch-basins	1,508 28
Sundries	302 84
Testing cement	225 88
Tools	68 09
Sewer in Alabama, Montgomery, New York and Wayland avenues	1,387 16
Sewer in Blackstone boulevard, west side, from Mount avenue to present end of sewer about 677 feet north of Rochambeau	3,274 98
Sewer in Camp street, from Pleasant about 150 feet northerly	332 27
Sewer in Exchange place, from near Washington row to end of present sewer in Exchange place about 25 feet west of Exchange street	1,093 57
Sewer in Fisher and Sackett streets	1,278 78
Sewer in Forest street, from Ivy to Hope	240 00
Sewer in Hart street, from Ivy to Hope	1,890 28
Sewer in Hawkins and Loveday streets	585 06
Sewer in Indiana and Vermont avenues	2,516 88
Sewer in Kinsley avenue, from Gaspee street to Eagle	23,859 18
Sewer in Lauriston, Brewster and Fourth streets	1,639 60
Sewer in Raymond street, from a point about 80 feet south of Chalkstone avenue to Ayrault street	833 30
Sewer in Rill and Tell streets	1,687 44
Sewer in Sassafras and Woodman streets	1,266 53
Sewer in Sixth and Poplar streets	240 00
Sewer in Somerset and Gay streets	8 78
Sewer in Wayland avenue, from north line of President to Lloyd	804 31
Sewer in Woonasquatucket District, Section 32, Division 1	14,106 94
Sewer in Woonasquatucket District,, Section 32, Division 2	15,340 44
Sewer in Woonasquatucket District, Section 32, Division 3	21,102 71
	$103,755 99

For maintenance, ... $42,511 32

Classified as follows:

Cleaning basins and sewers	$9,308 24
Repairing basins and sewers	3,719 56
Cleaning and repairing old drains	1,317 61
Tools	1,073 05
Sundries	843 42
Inspection of connections	722 48
Salary, superintendent	466 28
Barn expenses	440 56
Horses, wagons, harnesses, etc	194 97
Office expenses	65 98
Telephone lines	43 93
Car fares	35 00
Cleaning private connections	33 18
Repairs on buildings, sewer maintenance yard	23 33
Filling cisterns, etc	22 56
Carpenter shop	19 84

ERNEST STREET STATION.

Rebuilding engines and pumps	$6,847 10
Coal and wood	2,147 16
Engineers	1,213 69
Cleaning screens	695 68
Firemen	677 49
Repairs on intake	558 29
Cleaning and repairing pumps	341 66
Care of grounds	193 59
Supplies	109 56
Repairs on engines	105 49
Repairs on boilers	40 92
Lights	23 91
Care of buildings	19 98

SEWAGE PRECIPITATION TANKS.

Chemicals	4,796 29
Labor in sludge disposal	3,006 58
Labor on sewage precipitation	1,741 88
Miscellaneous supplies	1,058 58
Electrical power	489 25
Fuel	77 90
Repairs on scow	15 00
Repairs on machinery	10 11
Lights	8 58
Repairs on buildings	2 64
	$42,511 32

The *net* expenditure for construction of sewers to September 30, 1910, inclusive, was	$8,595,844 14
The *net* expenditure for maintenance of sewers to September 30, 1910, inclusive, was	$1,872,167 85

Bills deposited with the city treasurer for collection from July 1 to September 30, 1910, inclusive, amounted to . . . $1,020 88

As follows:

Miscellaneous work	$639 05
Cleaning private connections	39 00
Pumping out cellars	22 06
Electrical power furnished at carpenter shop	17 12
Sewer material	274 33
Laying drains to curbstone	26 82
Testing cement	2 50
	$1,020 88

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of $1,838 28

As follows:

Sale of old metals	$842 28
Miscellaneous work	629 49
Cleaning private connections	43 50
Pumping out cellars	18 56
Sewer material	274 33
Laying drains to curbstone	26 82
Testing cement	3 30
	$1,838 28

The amount of bills approved on account of sewers for the fiscal year ending September 30, 1910, inclusive, was as follows:

For construction . . . . .

Charged as follows:

Material	$37,187 46
Additional catch-basins	2,761 87
Contract reservations	2,199 00
Sundries	1,594 78
Testing cement	880 65
Tools	248 40
Building scow for residue disposal	5,923 49
Sewer in Alabama, Montgomery, New York and Wayland avenues	1,387 16
Sewer in Blackstone boulevard, west side, from Mount avenue to present end of sewer about 677 feet north of Rochambeau	3,274 98
Sewer in Camp street, from Pleasant about 150 feet northerly	332 27
Sewer in Cummerford street, from Wallace to Union avenue	895 08
Sewer in Darling street, from near Corliss to West River	556 01
Sewer in Dewey and Harvest streets	5 85
Sewer in Exchange place, from near Washington row to end of present sewer in Exchange place about 25 feet west of Exchange street	1,093 57
Sewer in Fisher and Sackett streets	1,278 78
Sewer in Forest street, from Ivy to Hope	3,400 65
Sewer in Hart street, from Ivy to Hope	1,890 28
Sewer in Hawkins and Loveday streets	1,172 50
Sewer in Hope and Savoy streets	155 41
Sewer in Hope street, from Hart to Rochambeau avenue	347 91
Sewer in Indiana and Vermont avenues	3,516 98
Sewer in Kinsley avenue, from Gaspee street to Eagle	42,255 86
Sewer in Lauriston, Brewster and Fourth streets	1,639 60
Sewer in Ledge and Silver Spring streets	4,261 42
Sewer in Lena and Latham streets	845 26
Sewer in Ohio avenue, from Virginia to Eddy street	386 52
Sewer in Raymond street, from a point about 80 feet south of Chalkstone avenue to Ayrault street	833 30
Sewer in Rill and Tell streets	2,361 19
Sewer in Sassafras and Woodman streets	2,261 00
Sewer in Sixth and Poplar streets	256 25
Sewer in Somerset and Gay streets	5,202 58
Sewer in Sumter and Richardson streets	1,577 86
Sewer in Wayland avenue, from north line of President to Lloyd	1,187 62
Sewer in Woonasquatucket District, Section 32, Division 1	65,161 81
Sewer in Woonasquatucket District, Section 32, Division 2	71,773 85
Sewer in Woonasquatucket District, Section 32, Division 3	74,303 94
	$344,411 14

For maintenance, ... $136,123 84

Classified as follows:

Cleaning basins and sewers	$23,235 22
Repairing basins and sewers	15,484 31
Cleaning and repairing old drains	3,709 26
Tools	3,123 51
Inspection of connections	2,694 12
Sundries	2,472 42
Barn expenses	2,061 53
Salary, superintendent	1,772 85
Removing snow and ice from inlets	1,507 36
Horses, wagons, harnesses, etc	868 02
Use of water	300 00
Office expenses	199 92
Telephone lines	178 08
Carpenter shop	108 52
Cleaning private connections	81 45
Car fares	65 00
Filling cisterns, etc	61 16
Repairs on buildings, sewer maintenance yard	33 45
Repairs on gate houses	15 59
Ernest Street Station.	
Rebuilding engines and pumps	10,961 07
Coal and wood	6,988 63
Engineers	3,888 23
Cleaning aed repairing pumps	2,709 71
Cleaning screens	2,688 72
Firemen	2,313 14
Repairs on engines	1,032 45
Care of grounds	644 17
Repairs on intake	558 29
Supplies	340 81
Repairs on boilers	180 85
Lights	120 67
Repairs on buildings	108 22
Care of buildings	70 38
Sewage Precipitation Tanks.	
Chemicals	13,887 59
Labor in sludge disposal	11,271 50
Repairs on scow	6,449 32
Labor on sewage precipitation	6,118 98
Miscellaneous supplies	3,331 85
Electrical power	1,889 75
Repairs on wharf	648 38
Fuel	627 62
Repairs on tanks	470 42
Repairs on buildings	344 00
Repairs on machinery	334 70
Care of grounds	91 78
Lights	80 80
	$136,123 84

HIGHWAYS.

Two permits to open streets were issued during the quarter.

July 12th, the proposal of John Triangolo to furnish and deliver in the city yard 100 pieces of 8-foot radius curbing at 65 cents per linear foot, and 100 two-foot curb corners at $2.10 each, was accepted.

July 23rd, a statement of the cost of concreting sidewalks in sundry streets, with ten per cent. added to cover the cost of assessing and collecting, was certified to the assessors of taxes, amounting to $2,462.81.

July 30th, a schedule of unpaid curbing bills amounting to $9,271.29 was certified to the assessors of taxes for collection.

August 19th, the proposal of the Connecticut Trap Rock Quarries to furnish and deliver in the city yard 2,000 tons of crushed stone at $1.25 per net ton, was accepted.

Seven hundred and twenty-six notices to build or repair sidewalks were served on the abutting owners during the nine months ending September 30, 1910. The work, including one hundred and seventy-two brought over from the preceding year, was done as follows:

By the abutting owners	695
By the city at the expense of the abutting owners	62
Extension of time granted to	28
Work not done	113

The length of received streets September 30, 1910, was about 243.19 miles measured on street lines and to street line intersection. But, as it is customary in street construction or street paving to complete the work to the curb line intersection, the lengths in the following tables are measured on those lines and sub-divided as follows:

Received streets	249.82 miles.
Streets curbed and built with macadam	173.48 miles.
Streets not curbed, but the roadway macadamized or graveled.	28.55 miles.
Streets curbed and paved (exclusive of macadam)	37.39 miles.
Streets received, but not improved	10.40 miles.
Total	249.82 miles.

The actual area of street pavement is 810.428 square yards. If this is estimated to an average width of roadway of 30 feet, it would be equal to 46.05 lineal miles, and is subdivided as follows:

Granite blocks	33.93 miles.
Cobble	4.96 miles.
Asphalt	5.12 miles.
Bitulithic	1.20 miles.
Vulcanite	.39 miles.
Brick	.45 miles.

In addition to the general patching necessary to maintain the streets in good repair, the following work has been done during the nine months ending September 30, 1910, namely:

New streets built of macadam	7,290.00	linear feet.
Streets paved with new material	350.00	linear feet.
Curbing set	16,119.00	linear feet.
Streets rebuilt	1,650.00	linear feet.
Streets resurfaced	107,900.00	linear feet.
Streets graded	7,650.00	linear feet.
Block pavement laid,	6,070.00	yards.
Asphalt pavement relaid	4,302.9	square yards.
Block paving relaid	18,216.00	square yards.
Brick paving relaid	459.4	square yards.
Concrete sidewalks laid	953.4	square yards.
Concrete sidewalks patched and top-dressed	2,278.5	square yards.
Crushed stone used	32,860.25	tons.
Screened gravel used	6,884.00	cubic yards.

Of the above amount of pavement laid and relaid, the cost of laying and relaying 7,456 square yards, amounting to $6,609.09 was paid by the corporations for which the work was done.

The following named streets, aggregating 20.43 + miles, have been resurfaced to September 30th:

Admiral street, from Seamans to Sharon.
Bath street, from Calverly to Orms.

Beacon avenue, from Maple street to Friendship.
Bellevue avenue, from Elmwood to Bucklin street.
Beulah street, from Veazie to Woodward road.
Brattle street, from Waldo to Potter avenue.
Broad street, from Public to city line.
Brown street, from George to Benevolent.
Bucklin street, from Daboll to Hawthorne.
Burnett street, from Dexter to Elmwood avenue.
Calhoun avenue, from Potter to Huntington.
Calverly street, from Promenade to Bath.
Carter street, from Bucklin to Elmwood avenue.
Chalkstone avenue, from Ashburton street to Smith.
Charles street, from Silver Spring 1,150 feet, northerly.
Dewey street, from Plainfield to Whittier avenue.
Dexter street, from Potter avenue to Huntington.
Diman place, from Angell street to Stimson avenue.
Dorchester avenue, from Webster to Laurel Hill.
Doyle avenue, from Morris to Hope street.
Eagle street, from Valley to Kinsley avenue.
Earl street, from Bucklin to Elmwood avenue.
Elmwood avenue, from Bridgham street to Earl.
Elton street, from Taber avenue to Wayland.
George street, from Benefit to Governor.
Governor street, from Wickenden to Pitman.
Hall street, from Ledge to Northup avenue.
Hawkins street, from Charles to Branch avenue.
Heath street, from Plainfield to Eastwood avenue.
Huntington avenue, from Carter street to Union avenue.
Indiana avenue, from Virginia to Eddy street.
John street, from Brook to Governor.
Killingly street, from Plainfield to Sunset avenue.
Kinsley avenue, from Acorn street to Eagle.
Knight street, from Broadway to Atwell avenue.
Laban street, from Heath to Laurel Hill avenue.
Laura street, from Broad to Melrose.
Livingstone street, from North Main to Printery.
Lloyd avenue, from Hope street to Prospect.
Manning street, from Hope to Governor.
Meeting street, from Prospect to Congdon.
Mawney street, from Bucklin to Elmwood avenue.
Merino avenue, from Barbara street to Merino bridge.
North Grove street, from Cemetery to Smithfield avenue.
North Main street, from Sexton to city line.
Norwich avenue, from Broad street to Baxter.
Orchard avenue, from Butler to Wayland.
Plainfield street, from Duxbury to Silver Lake avenue.
Pleasant street, from North Main to Padelford.
Pocasset avenue, from Plainfield street to Webster avenue.
Pocasset avenue, from Laurel Hill to city line.
Potter avenue, from Dexter street to Grand.
Power street, from South Main to Benefit.

Prairie avenue, from Thurber to Broad street.
Priscilla avenue, from Union to Sterling.
Prospect street, from Keene to Barnes.
Prospect street, from College to George.
Public street, from Broad to Taylor.
River avenue, from Allston street to Valley.
Salem street, from Waldo to Potter avenue.
Silver Lake avenue, from Union to Plainfield street.
Silver Spring street, from Commodore to Charles.
Smithfield avenue, from Branch to railroad bridge.
Taber avenue, from Angell street to Lloyd avenue.
Transit street, from Brook to Benefit.
Union avenue, from Webster to Messer street.
Updike street, from Peace to Public.
Veazie street, from Woodward road to Beulah street.
Vermont avenue, from Virginia to Eddy street.
Waldo street, from Dexter to Sorrento.
Wayland avenue, from Angell street to Elton.
Webster avenue, from Plainfield street to Eastwood avenue.
Wendell street, from Ellery to Cranston.
West Exchange street, from Aborn to Dean.
West Park street, from Bath to Valley.
Wheaton street, from South Court to Bowen.
Whittier avenue, from Laurel Hill to Plainfield street.
Woodward road, from Dakota street to city line.
Zone street, from Orms to Chalkstone avenue.

1.44 + miles of streets have been graded to September 30th, namely:

Admiral street, from Seamans to Sharon.
Beulah street, from Veazie to Woodward road.
Charles street, from Silver Spring to angle 1,150 northerly.
Ledge street, from Charles to Hastings.
Loveday street, from Admiral to Veazie.
Rice street, from Pearl to A.
Sackett street, from Broad to 256 feet westerly.
Sassafras street, from Broad to Niagara.
Silver Spring street, from Charles to Commodore.
Tell street, from Courtland to Ridge.
Veazie street, from Beulah to Woodward road.
Woodward road, from Veazie street to Dakota.

.31 miles of streets have been rebuilt to September 30th, namely:

Charles street, from Silver Spring to 1,150 feet westerly.
Silver Spring street, from Charles to Commodore.

During the quarter, the following work was completed:

SIDEWALKS CURBED AND GUTTERS PAVED.

Date of order.	
December 16, 1909,	*Tell street, from Almy to Ridge.*
February 17, 1910,	*Sassafras street, from Broad to Niagara.*
May 19, "	*Woodman street, from Bucklin to Elmwood avenue.*
" " "	*Bissell street, from Elmwood avenue westerly to the line of the Auburndale plat.*
" " "	*Rice street, from A to Pearl.*
" " "	*Sackett street from Broad 256 feet westerly.*
June 16, "	*Shepard street, east side, from Carpenter to a point about 95 feet northerly.*
August 4, "	*Somerset street, from Gay to Prairie avenue.*
" " "	*Gay street, from Dudley to Somerset.*

GRADE AND PUT IN GOOD CONDITION.

March 17, 1910,	*Portions of Charles, Silver Spring and Commodore streets.*

REMOVE OBSTRUCTIONS AND PUT IN GOOD CONDITION.

June 16, 1910,	*Admiral street, from Seamans to Sharon.*

The following work was in progress September 30, 1910:

SIDEWALKS CURBED AND GUTTERS PAVED.

Date of order.	
May 19, 1910,	*Loveday street, from Admiral to Veazie.*
" " "	*Raymond street, from Chalkstone avenue to Ayrault street.*
" " "	*Wayland avenue, from Lloyd to President.*
June 16 "	*Allens avenue, from Henderson street to Public.*

PAVE WITH GRANITE BLOCKS.

Date of order.	
June 7, 1910,	*Allens avenue, from Henderson street to Public.*

GRADE, BUILD AND IMPROVE.

June 7, 1910,	*Allens avenue, from Public street to Ernest.*

The following work, ordered by the board of aldermen and city council, had not commenced September 30, 1910, namely:

SIDEWALKS CURBED AND GUTTERS PAVED.

Date of order.	
December 16, 1909,	*Hart street, from Hope to Ivy.*
February 17, 1910,	*Rill street, from Allston to Valley.*
May 19, "	*Fourth street, from Summit avenue to Brewster street.*
" " "	*Brewster street, from Fourth to Lauriston.*
" " "	*Lauriston street, from Brewster to Hope.*
" " "	*Fisher street, from Hope to Morris avenue.*
August 4, "	*Wayland avenue, from President to Everett.*
" " "	*Oakland avenue, from Pleasant Valley parkway to Smith street.*

REBUILD.

June 8, 1909,	*Easterly portion of Exchange place, between Exchange street and the bridge over the river.*

Bills approved on account of highways from July 1 to September 30, 1910, inclusive, amounted to:

Regular appropriation	$107,191 56	
Special appropriation	7,357 40	
		$114,548 96

Classified as follows:

Cleaning streets	$27,161 13	
Repairs on unpaved streets	22,062 32	
Crushed stone — material and labor	12,634 20	
Stone — paving and crosswalk	6,454 04	
Repairs on paved streets	3,763 61	
Blacksmith and wheelwright shop	2,655 81	
Barn expenses	2,478 16	
Watering streets	2,057 54	
Labor on material	846 91	
Steam rollers — repairs and supplies	704 14	
Horses, wagons, harnesses, etc	657 21	
Tools implements, etc	636 46	
Superintendent's salary	364 29	
Building driveways, etc	362 02	
Fencing streets — material and labor	228 23	
Watchman at city yard	194 00	
Sundries	130 90	
Removing snow and ice	115 94	
Car fares	40 00	
Repairs on buildings, highway yard	10 00	
Office expenses, city yard	9 92	
Telephone lines	5 60	
Repairs on stone crusher	4 91	
		$83,577 34

New Work — Building and Rebuilding Streets, Etc.

Sidewalks Curbed and Gutters Paved.

Admiral street, from Seamans to Sharon	$1,454 81	
Bissell street, from Elmwood avenue westerly to the line of the Auburndale plat	773 68	
Gay street, from Dudley to Somerset	514 33	
Hart street, from Hope to Ivy	46 62	
Loveday street, from Admiral to Veazie	1,892 41	
Morris avenue, west side, from Cypress to Larch	313 84	
Raymond street, from Chalkstone avenue to Ayrault street	489 21	
Rice street, from A to Pearl	1,562 27	
Sackett street, from Broad 256 feet westerly	1,233 82	
Sassafras street, from Broad to Niagara	2,878 28	
Amounts carried forward	$11,159 27	$83,577 34

Amounts brought forward	$11,159 27	$83,577 34
Shepard street, east side, from Carpenter to a point about 95 feet northerly	373 72	
Somerset street, from Gay to Prairie avenue	1,591 22	
Tell street, from Almy to Ridge	1,640 31	
Wayland avenue, from Lloyd to President	750 82	
Woodman street, from Bucklin to Elmwood avenue	1,702 08	
		17,217 42

Grade and Put in Good Condition.

Portions of *Charles, Silver Spring and Commodore streets*	$6,396 80

Pave and Improve.

Allens avenue	7,357 40
	$114,548 96

Bills deposited with the city treasurer for collection from July 1 to September 30, 1910, inclusive, amounted to . . . $2,636 25

As follows:

Blacksmith and harness work for other departments	$752 26
Sale of old metals and rubber	507 28
Rentals for use of public highways	428 33
Labor and material	317 67
Boarding horses for other departments	223 36
Building driveways, etc	200 05
Street sweepings	98 50
Manure from barn	78 00
Use of oil cart	11 45
Discharging cargo at city wharf	9 75
Empty oil barrels	9 60
	$2,636 25

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of $3,306 09

As follows:

Labor and material	$826 25	
Blacksmith and harness work for other departments	730 74	
Rentals for use of public highways	562 91	
Sale of old metals and rubber	507 28	
Building driveways, etc	227 45	
Boarding horses for other departments	223 36	
Street sweepings	121 75	
Manure from barn	78 00	
Discharging cargo at city wharf	9 75	
Empty oil barrels	9 60	
One stone-drag	8 00	
Use of oil cart	1 00	
	$3,306 09	

Bills approved on account of highways for the fiscal year ending September 30, 1910, inclusive, amounted to:

Regular appropriation	$357,962 62	
Special appropriation	7,357 40	
		$365,320 02

Classified as follows:

Cleaning streets	$84,892 71	
Repairs on unpaved streets	61,505 61	
Crushed stone—material and labor	43,894 36	
Repairs on paved streets	29,850 34	
Removing snow and ice	15,650 18	
Stone—paving and crosswalk	15,625 04	
Barn expenses	11,154 94	
Blacksmith and wheelwright shop	11,126 18	
Screening gravel	6,690 53	
Steam rollers—repairs and supplies	4,754 34	
Watering streets	4,110 90	
Labor on material	3,920 49	
Tools, implements, etc	3,129 97	
Horses, wagons, harnesses, etc	2,609 44	
Repairs on stone crushers	1,945 56	
Superintendent's salary	1,670 86	
Fencing streets, material and labor	1,292 57	
Building driveways, etc	916 14	
Watchman at city yard	730 00	
Sundries	473 87	
Office expenses, city yard	332 07	
Car fares	110 00	
Repairs on buildings, highway yard	74 48	
Telephone lines	22 40	
Removing stone crusher to Northup avenue	11 44	
		$306,494 42
Amount carried forward		$306,494 42

Amount brought forward.....		$306,494 42

New Work — Building and Rebuilding Streets, Etc.

Sidewalks Curbed and Gutters Paved.

Admiral street, from Seamans to Sharon.....	$1,454 81	
Baxter street, from Reynolds avenue to Potter.....	415 89	
Bissell street, from Elmwood avenue westerly to the line of the Auburndale plat.....	773 68	
Cumerford street, from Wallace to Union avenue...	2,004 50	
Dewey street, from Laban to Eastwood avenue....	1,122 83	
Dewey street, east side, from Whittier avenue to Laban street.....	394 68	
Gay street, from Dudley to Somerset....	514 33	
Hart street, from Hope to Ivy.....	46 62	
Harvest street, from River avenue to Robin street..	1,086 67	
Jillson street, from Broad to Eddy.....	1,365 38	
Ledge street, from Charles to Silver Spring.....	5,483 15	
Loveday street, from Admiral to Veazie.....	1,892 41	
Morris avenue, west side, from Cypress to Larch..	1,259 36	
Oakland avenue, from Eaton street to Smith.....	3,022 80	
Raymond street, from Chalkstone avenue to Ayrault street.....	489 21	
Rice street, from A to Pearl.....	2,453 10	
Sackett street, from Broad 256 feet westerly.....	1,233 82	
Sassafras street, from Broad to Niagara.....	2,878 28	
Shepard street, east side, from Carpenter to a point about 95 feet northerly.	373 72	
Sixth street, from Summit avenue to Hope street..	2,914 47	
Somerset street, from Gay to Prairie avenue.....	1,591 22	
Sumter street, from Emerson to Hamilton.....	3,014 76	
Tell street, from Almy to Ridge.....	1,702 31	
Wayland avenue, from Lloyd to President.....	750 82	
Woodman street, from Bucklin to Elmwood avenue	1,702 08	
		39,940 90

Pave with Granite Blocks.

Fountain street, from Dean to a point 50 feet west of Cargill.....	3,238 88

Grade and Put in Good Condition.

Portions of *Charles, Silver Spring and Commodore streets*	8,288 42

Pave and Improve.

Allens avenue.....	7,357 40
	$365,320 02

BRIDGES.

Bills approved on account of bridges from July 1 to September 30, 1910, inclusive, amounted to $7,693 30

Charged as follows:

Acorn street bridge	$25 20
Barn expenses	134 73
Building at city yard	75 01
Burnside bridge	433 66
Car fares	25 00
Cemetery street bridge	55 03
Charles street bridge	111 88
Crawford street bridge	56 68
Eagle street bridge	77 40
Exchange bridge	28 69
Francis street bridge	27 56
Geneva bridge	2 51
Hawkins street bridge	6 59
Horses, wagons, harnesses, etc	300 65
Lumber, hardware, etc	435 36
Merino bridge	110 54
Mill street bridge	298 65
Park street bridge	168 76
Point street bridge	483 82
Post office bridge	39 90
Promenade street bridge	563 84
Red bridge	504 72
Rent of keeper's house — Washington bridge	36 00
Salaries — Point street bridge	1,183 75
Salaries — Red bridge	618 29
Salaries — Washington bridge	614 09
Smith street bridge	3 35
Stevens street bridge	4 93
Sundries	373 05
Telephone lines	25 27
Tools	115 50
Valley street bridge — north span	77 55
Valley street bridge — south span	36 79
Wanskuck bridge — to rebuild	8 64
Washington bridge	578 14
Washington row bridge	60
West river street bridge	39 59
Weybosset bridge	1 60
Whelden street bridge	9 98
	$7,693 30

Bills deposited with the city treasurer for collection from July 1 to September 30, 1910, inclusive, amounted to . . . $379 73

As follows:

Sale of old metals	$371 23
Sale of old lumber	7 00
Sale of paint stock	1 50
	$379 73

During the quarter, coupons from bills collected have been returned by the city treasurer and receipted for to the amount of $379 73

As follows:

Sale of old metals	$371 23
Sale of old lumber	7 00
Sale of paint stock	1 50
	$379 73

Bills approved on account of bridges for the fiscal year ending September 30, 1910, inclusive, amounted to $24,420 76

Charged as follows:

Acorn street bridge	$25 20
Atwells avenue bridge	7 56
Barn expenses	493 36
Branch avenue bridge, to rebuild	406 23
Building at city yard	87 08
Burnside bridge	433 66
Car fares	75 00
Cemetery street bridge	95 89
Charles street bridge	111 88
Charles street railroad bridge	1 60
Crawford street bridge	300 36
Eagle street bridge	101 66
Exchange bridge	28 69
Francis street bridge	178 32
Gaspee street bridge	60 60
Geneva bridge	7 89
Hawkins street bridge	6 59
Amount carried forward	$2,421 57

Amount brought forward	$2,421 57
Horses, wagons, harnesses, etc	384 86
Lumber, hardware, etc	730 12
Manton bridge	7 05
Manton avenue bridge	5 85
Merino bridge	788 07
Mill street bridge	808 67
Park street bridge	197 08
Point street bridge	1,382 76
Post office bridge	62 27
Promenade street bridge	622 79
Randall street bridge	14 24
Red bridge	2,797 68
Rent of keeper's house—Washington bridge	144 00
Salaries—Point street bridge	4,343 00
Salaries—Red bridge	2,309 90
Salaries—Washington bridge	2,352 20
Smith street bridge	36 79
Smithfield avenue bridge	6 88
Stevens street bridge	4 93
Sundries	1,285 02
Telephone lines	33 31
Tools	519 58
Valley street bridge—north span	241 65
Valley street bridge—south span	94 66
Wanskuck bridge, to rebuild	666 69
Washington bridge	1,828 98
Washington row bridge	54 70
West River street bridge	44 86
Weybosset bridge	220 62
Whelden street bridge	9 98
	$24,420 76

PUBLIC LIGHTS.

Bills approved on account of the public lights from July 1 to September 30, 1910, inclusive, amounted to $69,777 54

Charged as follows:

Arc lights	$48,584 30
Incandescent lights	14,657 33
Welsbach lights	6,457 10
Salaries	63 00
Setting and removing gas posts	15 81
	$69,777 54

Bills deposited with the city treasurer for collection (for lamp posts, lanterns and frames), from July 1 to September 30, 1910, inclusive, amounted to $37 50

During the quarter, coupons from bills collected (for lamp posts, lanterns and frames), have been returned and receipted for to the amount of $37 50

Bills approved on account of the public lights for the fiscal year ending September 30, 1910, inclusive, amounted to . . $276,140 04

Charged as follows:

Arc lights	$192,310 33	
Incandescent lights	57,644 27	
Welsbach lights	25,558 86	
Salaries	555 00	
Setting and removing gas posts	71 58	
		$276,140 04

PUBLIC WORKS OFFICE.

Bills approved on account of the public works office from July 1 to September 30, 1910, inclusive, amounted to . , . $5,837 65

Charged as follows:

Salaries of commissioner and secretary	$1,925 00
Salaries of office assistants	3,409 14
Office supplies	473 33
Telephone lines	30 18
	$5,837 65

Bills approved on account of the public works office for the fiscal year ending September 30, 1910, inclusive, amounted to . $22,747 60

Charged as follows:

Salaries of commissioner and secretary	$7,700 00
Salaries of office assistants	13,774 83
Office supplies	1,152 05
Telephone lines	120 72
	$22,747 60

FORESTRY.

Bills approved on account of the forestry department from July 1 to September 30, 1910, inclusive, amounted to . . . $2,215 04

Charged as follows:

Salary, city forester	$384 00
Trimming, repairing and removing trees and shrubs	1,476 77
Barn expenses	95 73
Tools and supplies	81 45
Spraying trees and shrubs	80 11
Horses, wagons, harnesses, etc.	74 71
Planting trees in highways	20 25
Nursery at Roger Williams park — labor and supplies	2 02
	$2,215 04

Bills approved on account of the forestry department for the fiscal year ending September 30, 1910, inclusive, amounted to . $7,103 70

Charged as follows:

Salary, city forester	$1,460 00
Trimming, repairing and removing trees and shrubs	3,164 34
Nursery at Roger Williams park — labor and supplies	753 07
Barn expenses	711 17
Planting trees in highways	528 37
Tools and supplies	214 63
Horses, wagons, harnesses, etc.	176 41
Spraying trees and shrubs	95 71
	$7,103 70

WALTER F. SLADE,
Commissioner.